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Original Articles

LICHEN PLANUS OF THE ORAL MUCOSA

WITH REPORT OF TWO CASES *

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CHICAGO

In his work on "Differentialdiagnose von Dermatosen und Lues bei den Schleimhauterkrankungen der Mundhoehle, etc," Trautmann gives a carefully prepared review of the 72 cases of lichen planus of the mucous membranes published up to 1903 There are other cases mentioned in literature, but very briefly Considering the comparatively frequent occurrence of lichen planus of the skin, the localization of the process on the mucous membranes is rather rare, and it is interesting to note that this subject is rarely and only recently touched on in American literature Among the cases cited by Trautmann none is from an American author The importance of this affection is evidenced by the fact that it may easily be confounded with syphilis There are cases of lichen planus which have a distribution limited to the palms of the hands or to the soles of the feet, or to the penis or to the scrotum, or to two, three or all of *these localities which may show some resemblance to* syphilitic manifestations In some cases painless swelling of lymphatic glands is noted Now if besides such cutaneous lesions and swelling of glands symptoms of lichen planus occur on the mucous membranes of the oral cavity, throat and lips, how easily may a misinterpretation take place and lead *to most embarrassing situations*

DESCRIPTION OF DISEASE

Lichen planus affects most frequently the mouth, rarer the anus and urethra, rarest the larynx It begins either contemporaneously with the lesions on the skin or it may precede or follow them In a number of cases the mucous manifestations are the only symptoms of the disease, in which instance, a mistake in the diagnosis may also be easily made Just as the eruption of the skin is characterized by the development of typical papules from which other pictures are derived, so are the lesions of the mucous membranes resultant from elementary lesions, papules of which show quite different characters from those of the papules of the skin The elementary lesion of the mucosa presents a punctate to pinhead size, rarely larger, white and glossy or grayish-white and dull (the latter if situated on the tongue) elevation with a flat hemispherical or conical top and a roundish or polygonal basis which as a rule is sharply defined, i e, surrounded by perfectly normal mucous membrane It is hard and rough to the touch and causes no subjective symptoms Such papules rarely remain solitary but coalesce and present various lesions, which show their origin from papules if in a recent stage of development

On the cheeks, lichen planus as a rule affects that part which is just opposite the interdental space and presents papules, oval or circular plaques and most frequently streaks or linear projections with intervening furrows These projections are arranged in different ways, parallel to each other, convergent or divergent, crossing each other in different directions and forming networks or stellar or brush-like formations They all show the characters of the elementary papules In other words, they are opaline, sharply defined and painless

The lesions of the tongue differ somewhat On the back, they present irregular, oval or circular plaques, while on the upper and lower surfaces of the margins solitary papules are found or, more frequently, irregular or band and streak-like plaques All these differ from the lesions of the cheeks They are as a rule not sharply defined They are smooth, less hard, not raised above the level of the normal surface, not glossy, but dull and grayish-white On the mucous membrane of the lips, the papules form irregular plaques and on the vermilion border groups or irregular plaques

On the soft and hard palates and on the gums, solitary and aggregated papules are more frequent than plaques or networks On the tonsils the more solitary lesion prevails As mentioned, the older the process of the mucosa becomes, the more do the papules coalesce and lose their distinct outlines until the elementary lesions can not be recognized as such The plaques and streaks lose to a great extent their roughness and hardness and at last they become so flat that there is no elevation present, but only the shiny white discoloration resembling a mucosa touched with silver nitrate (Thibierge) [1] These lesions show no tendency to degenerative changes, no erosion or ulceration occurs The anatomy is similar to that of the lesions of the skin

DIFFERENTIAL DIAGNOSIS

Some difficulties are encountered in the differentiation between lichen, leukoplakia proper and syphilitic lesions It can not be denied that there are striking similarities between the first two, but a number of points may be observed showing a difference In leucoplakia the patient as a rule, will consult the physician on account of subjective symptoms, of dryness, stiffness, more or less pain at the ingestion of hot or very cold liquids or spicy substances, while in lichen planus the lesions of the cheeks are rarely noticed by the patient and then only in rare instances when the tongue touching them perceives slight roughness, while se of the ton be felt as a slight st n ation Le

* Read in the Section on Cutaneous Medicine and Surgery of the American Medical Association at the Fifty seventh Annual Session, June 1906

1 Annal Derm a

never heals without local interference, while lichen planus may heal spontaneously or disappear by the administration of arsenic, while the cases calling for local treatment are in the minority

The changes observed on inspection differ materially from those of lichen planus Papular formations are rarely encountered and if plaques present themselves, they are, as a rule, thickened and hardened If on the cheeks and of a recent stage of development, they affect in many instances the mucosa behind the angle of the mouth, while lichen frequently first develops on the posterior portion If left untreated, leucoplakia shows

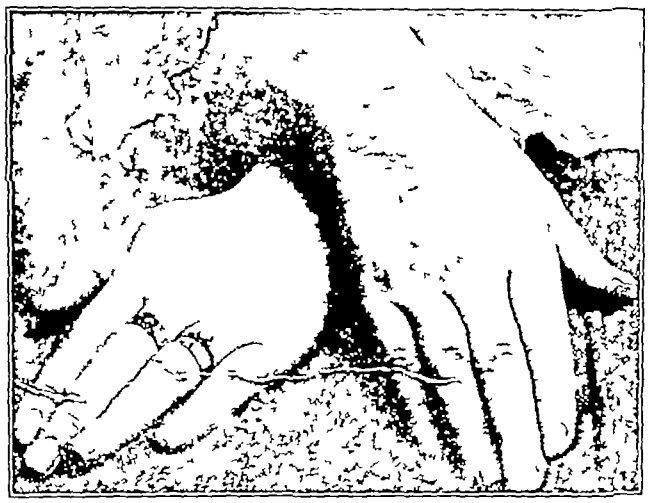

Fig 1 —Lichen planus of the dorsa of the hands

he tendency to increase in thickness with time, to become rough, rugged, and even exfoliating, while lichen planus becomes flatter and smoother continuously until at last it is level with the mucosa and represents only a discoloration such as is produced by the application of silver nitrate This latter appearance is noted also in recurring lichen planus In lichen planus the papillæ of the tongue are flattened while in leucoplakia they may be accentuated Leucoplakia is infrequent in women while lichen planus is equally frequent in both sexes At this juncture I call attention to the excellent editorial of Dr J N Hyde,[2] "Lichen Planus and Leucoplasia of Mucous Surfaces"

The differential points between syphilis and lichen planus of the mucosa are Syphilitic lesions of the mouth are painful (except plaques of the tonsils which in spite of their extensive development sometimes may be painless), lichen eruptions are painless The syphilitic mucous plaques are situated within a highly reddened infiltrated area, lichen planus is surrounded by perfectly normal mucosa The syphilitic manifestations show a tendency to progressive changes, viz, erosion, ulceration and proliferation, lichen planus, though also quite persistent—lasting sometimes for months—shows no such changes These, together with the characteristics of lichen planus previously described may serve to differentiate these processes In addition to these, the cutaneous lesions—if present and typical—and also the effect of specific treatment will aid the practitioner to establish a diagnosis

2 Jour Cut Dis Incl Syph 1903 p 105

TREATMENT

As regards the treatment, we must repeat what has been already mentioned, viz, that lichen planus will at times heal spontaneously Some cases yield promptly to the administration of arsenic, the mucous lesions healing as readily as those on the skin In other cases the mucosa heals later, while some do not even yield to arsenic nor any other systemic treatment Touton[3] recommends highly the local application of a 1 per cent solution of bichlorid in alcohol It is well to prevent all irritation from sharp substances and to instruct the patient as to all necessary hygienic care of the mouth I am indebted to Trautmann's book for many details which are contained therein as collected from the literature of this subject

CASE REPORTS

I wish now to describe the cases which have come under my observation The patient in Case 1, already reported[4] was afflicted with lichen planus hypertrophicus, on whose buccal mucosa were found two typical planus papules in the course of his disease

CASE 2 —Patient, aged 21, male, came under my observation in January, 1903

History —Family history was negative as to skin affections or syphilis Outside of diseases of childhood he had passed through no serious illness For the last four or five years he had used tobacco immoderately He consulted me for a gonorrheal infection of the urethra and bladder

Examination —Examination also revealed tuberculosis of the apices of both lungs The blood showed hemoglobin 75 per cent, red corpuscles a little over 4,000 000, leucocytes, 8,000 No other abnormal conditions were found except the affection of the skin and oral cavity which I detected at the examination The manifestations of lichen planus were limited to the forearms, abdomen, penis, scrotum and buccal mucosa On the lower surface of the penis and on the left side of the scrotum typical flat polygonal pinhead to pea sized papules were noted which were mostly arranged in ringed formations, and plaques up to the size of a dime with polygonal borders and all the other characteristics of the papules They were dense, yellowish red and of waxy appearance On the flexor surfaces of the distal ends of the forearms were about half a dozen lesions, and below the umbilicus a group of five papules All these showed the same characteristics as the lesions on the scrotum and penis

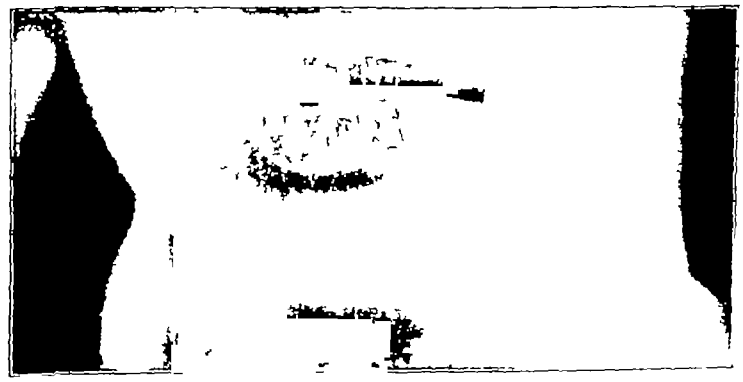

Fig 2 —Lichen planus of the lip

and were not larger than a split pea The cutaneous eruption caused no inconvenience and he noticed it only at the time of infection with gonorrhea, one month before his first visit to my office He denied noticing any sensations in the mouth On inspection, I found on the posterior part of the mucous surface of both cheeks opposite the interdental space white glossy linear elevations, forming an irregular network and anteriorly to these

3 Berlin klin Wochschr 1886 No 23
4 THE JOURNAL A M A Jan 11 1902.

a number of pinpoint to pinh ad size flat papules The streaks forming the networks showed clearly their derivation from soli tary papules and all the typical symptoms as previously de scribed They were hard and rough to the touch No other parts of the mucous membrane were affected with lichen, but a pharyngitis sicca was present The inguinal glands were slightly enlarged and painless, as also the cervical and sub maxillary

For various reasons I deferred the treatment of his lichen planus The lesions of the skin did not increase in number nor in size, but, on the contrary, they gradually faded, until in April of the same year all had disappeared The patient was under my care for three more months when he was discharged At that time the mucous surface was as free from lesions as the skin, although no treatment had been employed

Further Examination—In April, 1906, he called on me for treatment of scabies I interrogated him as to whether he had noticed any lesions in the mouth or on the skin during the last three years, but he had paid no attention to the matter Besides the symptoms of scabies, I found the following The penis and scrotum were free from lichen though the leucoder matic spots were still present and of the same size as three years ago, but now with a hyperpigmented area An irregular leucodermatic spot was also seen on the radial side of the left forearm the former seat of lichen lesions There were four lichen lesions of pinhead to split pea size on the flexor surface of the distal end of the right forearm, and three pinhead size on the corresponding part of the left forearm On the lower part of the back, to the left of the spinal column, were three papules of pinhead size All these papules were yellow and waxy

On the left margin of the tongue were two plaques, one of the size of a pea, the other of a bean, and between these a dull

Fig 3—Microscopic section of lichen planus Low power

white streak On the buccal mucosa of both sides were irreg ular plaques reaching up to the soft palate On the gum of the lower jaw on both sides around the molars, white streaks and irregular plaques were noted and on the uvula an irregular white spot All of the last described lesions of the mouth were perfectly smooth not elevated opaline most of them resem bling a mucosa touched with silver nitrate

At the April meeting of the Chicago Dermatological Society (1903), I demonstrated the patient at which time the mucous lesions were still present, but the cutaneous surface was completely free except that those parts of the penis and scrotum which had previously been the seat of lesions, showed a total absence of pig ment In other words, there was a leucoderma or vitil igo, which differed from its normal appearance by the absence of the hyperpigmented zone This case bears a striking resemblance to the cases of Pincus[5] and Dan los[6]

CASE 3—A girl aged 18 consulted me for her ailment about the time I cared for Case 2 She was chiefly annoyed by the appearance of her hands and lower lip

History—In her family history I elicited nothing bearing on her case nor had she had any previous skin affection or other

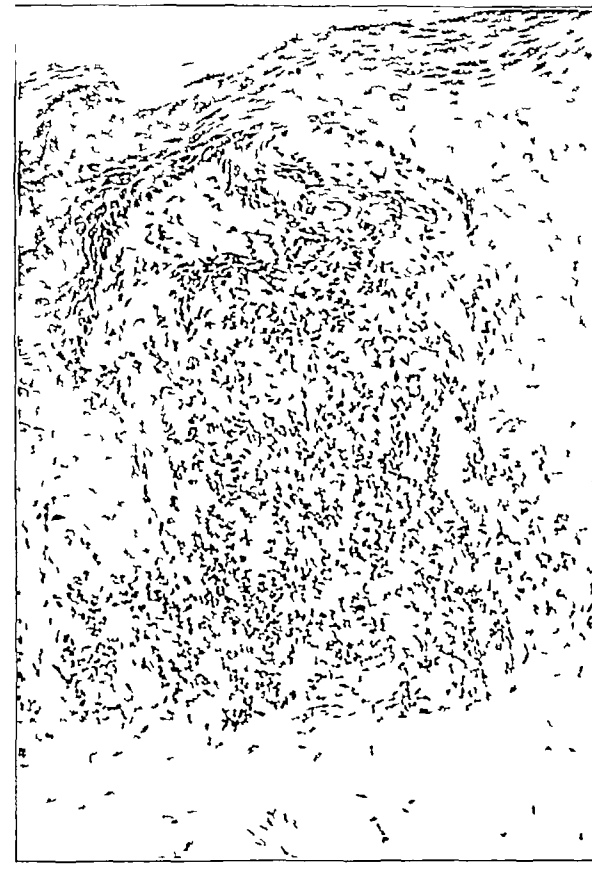

Fig 4—Microscopic section of lichen planus High power

serious illness She had always enjoyed good health Her pres ent condition dated back a month or two beginning first on her hand and subsequently affecting her lip She complained of itching of the scalp

Examination—Examination of the internal organs and urine was negative The blood showed a decrease in hemoglobin to 70 per cent. The scalp revealed the presence of excoriations due to pediculosis On the nape of the neck were excoriations and livid flat elevations varying in size from a pinhead to that of a bean They showed the typical characteristics of lichen, some of them closely representing the former seat of excoria tions They were all irregular in outline and had a rather rough surface The nuchal and cervical glands were enlarged and slightly painful On the dorsum of the right hand were about 25 polygonal lesions, pin head to pea size of a pale yellowish red color, flat, smooth and shiny the larger ones showing distinctly their derivation from the coalescence of smaller papules (Fig 1) Be

5 Dermat. Ztschr 1903 p 169

6 Annal Derm and Syph 1904 p 486 Iso the s of Riecke on Lichen Planus Mracek's Ha r II helten 1905

sides, in the larger ones, there was a perfect depression reaching to the level of the normal skin, the color of this central portion being yellowish brown (Lichen annularis) In the right inguinal region there was a group of about ten papules of the same appearance as those on the dorsum of the right hand but without a central depression On the dorsum of the left hand were a few typical papules, pinpoint to pinhead size No other part of the cutaneous surface was affected

The vermilion border of the lower lip showed a copious eruption consisting of groups of pinpoint to pinhead size opaque, white, polygonal and round papules, sharply defined and irregular as well as roundish white opaque plaques of various sizes, some of the round ones having a depressed center (Fig 2) The margins of all these lesions were slightly raised above the level of the normal portions of the vermilion border, of which there was not much left unaffected They felt dry and rough to the touch On the upper and lateral surface of the left margin of the tongue and the lower surface of the right margin there were grayish white, irregular and streak like smooth plaques not sharply defined On the back of the tongue in its posterior half were three slate colored plaques arranged asymmetrically in the raphe in close proximity one behind another Their size was about that of a dime, their surface smooth and dull and lacking the distinct papillæ Their consistence was not different from that of the surrounding normal mucosa They were not raised There was no hyperemia or infiltration zone around them They were round and did not show any trace of their origin from typical mucous papules, while on the borders of the tongue and the vermilion border of the lower lip there were true papules and papular indications in the periphery of the plaques The clinical symptoms justified the diagnosis of lichen planus

Patient objected to an excision from the lip or tongue but a piece was excised from a larger lesion of the dorsum of the right hand It was fixed in Zenker's solution The paraffin sections were stained in hematoxylin and eosin, Unna's alkaline methylene blue eosin and carmine and Weigert for elastic fiber

Microscopic Examination.—(Figs 3 and 4) The epidermis as a whole is thickened The horny layer consists of horny wavy lamellæ and is loosely attached It is thickened and does not show any nuclei The granular layer is in places thickened The stratum spinosum is also thickened and shows widened intercellular spaces especially in its lower portion Some of the cells show vacuoles and between the lower rows of cells round infiltration cells penetrate from the papillary layer The pigment is not increased The epithelial projections are broadened and elongated The papillæ between these enlarged pegs are also hypertrophied and show a dense infiltration of small round cells which show a tendency to arrangement along the dilated blood and lymph vessels Typical plasma cells or plasma mast cells were not found The subpapillary layer shows the same dense infiltration and beneath this all infiltration ceases abruptly The reticular layer of the corium is perfectly normal excepting here and there a few rows of cells around blood vessels The networks of elastic fibers are normal Follicles and sebaceous glands were not found Around the lichenoid structure the skin were perfectly normal (Figs 3 and 4)

Treatment.—This consisted in the administration of pills of reduced iron, arsenious acid in increasing doses and a regulated diet No local applications were made The lesions of the skin and of the mucosa showed decided improvement after about three weeks when the patient disappeared from my care

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[THE DISCUSSION ON DR. LIEBERTHAL'S PAPER IS IN THE BACK PART OF THE JOURNAL, UNDER "DISCUSSIONS"]

The Medical Genius.—The genius in the medical profession is rare I can not remember that I ever met one, but I have met lots of great big fellows who possessed and made use of the average amount of brains which was theirs One of the glories of our country is that they are to be found everywhere and in all lines of work.—James F Percy M D in the *Illinois Med Jour*

MYOMATA CUTIS *

M L HEIDINGSFELD, M D
CINCINNATI

Reduplication of the involuntary muscular fibers of the skin to the degree of tumor formation is probably one of the rarest conditions encountered in dermatology, if the limited number of accepted cases thus far reported in the literature is duly considered It is more rarely encountered if Besnier's[1] commonly accepted classification is observed and those cases which primarily spring from subcutaneous muscular tissue, the dartos, labia, mamma, etc, the so-called dartoic myomata, which are essentially of surgical importance, are properly excluded Radcliffe Crocker[2] states that his case is the eleventh clearly defined instance in the literature and accords value to the two additional cases of Wolters'[3] doubtful classification Leslie Roberts[4] asserts in 1900 that his additional case constitutes the fifteenth well defined instance There have been but few cases reported in recent years and Huldschinsky[5] maintains that his constitutes the sixteenth additional case

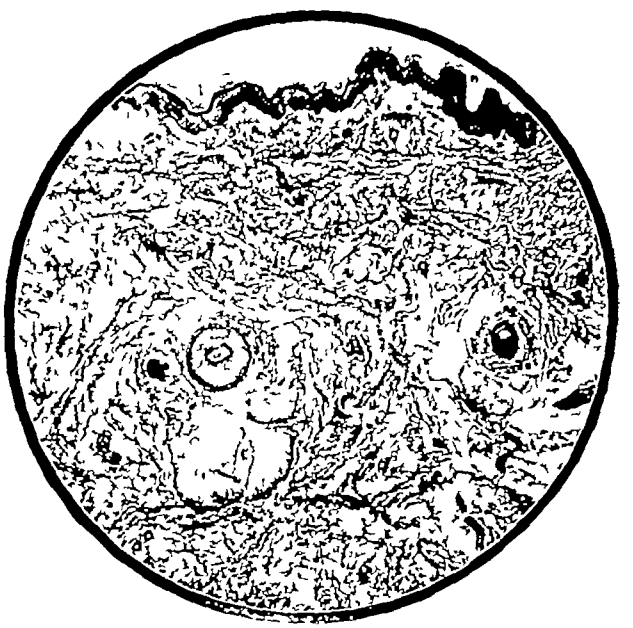

Fig 1.—Case 1 Incipient growth of myomatous tissue in proximity to their hair follicle and corresponding to the site of its arrector pili from which it has probably taken its origin

A casual survey of the literature reveals a somewhat larger number of cases of myoma cutis, than some of these reports indicate, and this disparity exists because many cases are not credited recognition, since they lack certain clinical characteristics Myomata cutis present exceedingly varied clinical manifestations, but a fairly uniform, easily recognized, and somewhat characteristic histopathology

In cutaneous affections it is essential to show a fair degree of consideration to the clinical aspects, it is equally important to give proper attention to the histopathology It seems particularly unjust and unwarrant-

* Read in the Section on Cutaneous Medicine and Surgery of the American Medical Association at the Fifty seventh Annual Session June, 1906

1. Ann de Derm 1880 p 25 also p 332
2. Brit Jour Derm 1897 pp 1 to 48
3. Wolters Arch f Derm u Syph. 1893 xxv p 414
4. Brit Jour Derm 1900 xii p 116
5. Inaug Diss 1901

able, to ignore entirely the stable and easily recognized histopathology in behalf of a varied and indeterminate clinical character

REVIEW OF LITERATURE

The clinical characteristics as already stated are exceedingly varied The lesions are single or multiple, congenital or acquired Single lesions are reported by Forster,[6] Sokolow,[7] Axel-Key,[8] Audry,[9] Santesson,[10] Miglionini,[11] Herzog,[12] etc, and are generally excluded from general recognition The multiple cases vary from a few to sixty or more as in the case of Lukasiewicz,[13] 100 or more as in Marshalko's[14] case or innumerable as in the cases of Verneuil[15] and Besnier[1] Some develop in earliest infancy (Hess,[16] Jarisch[17]), the majority during adolescence, and not a few in advanced age Unna,[18] Darier, Krzysztalowicz[19] and a few other observers attribute a congenital character to the affection, and hold it an additional confirmation of Cohnheim's theory of embryonic remains, puberty, stimulating the developmentally misplaced tissue to renewed activity Wolters'[20] third case, which occurred over a meningocele and

Fig 2.—Case 1 Interlacing bundles of myomatous tissue and inflammatory exudate, taken from the center of the growth

Dore's[21] case in a man of 29, whose father was also afflicted with the same condition, are important contributions to the congenital origin of at least some of the cases

In a number of cases the lesions manifested themselves late in life, and were of short duration Whitfield[22] reports a case in a man 47 years of age, of five to six years' duration Graham Little's[23] case occurred in a middle-aged woman and was scarcely of six months' duration In White's[24] case the first lesion occurred four years prior in a man aged 45 years A traumatic origin has been attributed to a few of the cases Jadassohn's[25] second case, in a female aged 37, followed vaccination Brigidi and Maracacci's[26] case in a man aged 54, was preceded by swelling of the dorsum of the right hand without cause, which was followed in three months with the appearance of the nodules, and deep wine stains of telangiectasis This was followed in eighteen months by the formation of similar lesions on the left hand and feet Whitfield's[22] case followed an eruption of blisters The lesions vary in size from a millet seed to a hazel nut, or larger, and are distributed as a rule over limited areas, a portion of the trunk or face, or one of the extremities with no special area of predilection The color of the lesions varies from red, brown, yellow, blue, purple dark-colored to translucent or colorless Many are accompanied with marked dilatation of the superficial capillaries and veins of the immediate neighborhood, of sufficient degree to mask the clinical appear-

Fig 3.—Case 1 Myomatous tissue and inflammatory exudate containing cavernous dilated blood vessels in the superficial portion of the growth

ance of the myomatous lesions so that the first diagnosis is often that of angioma, or cavernous angioma, for this reason Neumann[27] divides myomata into two classes, (1) pure myomata, tumors of involuntary muscular tissue with a small amount of fibrous and elastic tissue, and (2) cavernous myomata, which are also rich in vascular tissue and cavernous spaces For the same reason Virchow[28] classes the affection with the erectile tumors under the head of myoma telangiectodes Severe paroxysmal pain, sharp lancinating, vice-like in nature which may occur spontaneously at any period of the twenty-four hours or be induced by physical exertion

6 Wien med Wochschr 1858 p 130
7 Virchow s Archives 1873 lviii p 316 Quoted by Neumann
8 Quoted by Neumann
9 Ann de Derm et de Syph 1898 ix p 182
10 Quoted by Neumann
11 Giorn ital delle Mal Ven e della pelle No 1 1905 abst N P D, vol xl p 610
12. Jour Cut Dis. 1898 xvi p 527
13 Arch f Derm u Syph xxxiv 1892 p 33
14 Monatschr f prakt Derm 1900 xxxi p 317
15 Soc. Anat 1858
16 Virchow s Archives 1890 cxx p 321
17 Deutsch Derm Gesell 1895 v p 360
18 Histopathologie der Haut p 863
19 Monatbl f prakt. Derm 1906 xlii p 307
20 Derm Ztschr No 7 1905
21 Brit Jour Derm 1902 p 55
22 Brit Jour Derm xvii p 207
23 Derm Soc. London June 14 1905 also Brit Jour Derm xvii p 265
24 Jour Cut Dis 1899 xvii p 266
25 Virchow s Archives 1880 71 p 88
26 Imparziale 1881 Quoted by Neumann
27 Arch f Derm u Syph xxxix p 3 Ann de Derm Syph 1897 p 93
28 Virchow s Archives 1854 pp ten Geschwülste vi

temperature changes, or local pressure, is present in somewhat over one-half the cases It is commonly regarded an important diagnostic symptom, but is entirely absent in a large per cent of the cases It occurs for the most part in the larger and longer standing lesions, and is explained on the basis of pressure of the muscular tissue on included nerves Joseph[20] regards it as merely a coincident, without possessing special clinical significance

The clinical features therefore are of such a varied and indefinite character that the diagnosis is a matter of conjecture in the most favored instances, and generally requires histologic confirmation to merit unqualified acceptance In many of the cases the diagnosis was not made until the microscopic examination was completed, which resulted in not a few instances in a change from xanthoma, lymphangioma, epithelioma, keloid, adenoma sebaceum, etc, to myoma

Herzog's[12] diagnosis was based purely on the histologic examination, the single slowly growing, rather painful lesion on the cheek, which was about two-fifths of an inch in diameter was previously diagnosed epithelioma, and excised for histologic examination The prehistologic diagnosis in Krzysztalowicz's[19] case was adenoma sebaceum, with lesions on the ala, and septum of the nose and lip The cases of Babes,[30] Brigidi and Maracacci[28] are probably derived from nevi and are generally discredited (Unna[19]) The material from Vernieuil's[15] case came from the dissecting room The lesions in Whitfield's[22] case were so translucent that a lymphangioma was suspected, until fluid failed to exude on puncture, and the biopsy established the myomatous character of the lesion Neumann[27] remarks the clinical resemblance of his case to xanthoma tuberosum, or urticaria papulosa Wolters'[20] second case bore a deceptive clinical resemblance to xanthoma diabeticorum, and he states that a case of Crocker's,[2] reported as xanthoma may be rather a case multiple myoma If the clinical features, neither in point of form, color, consistence, derivation, spontaneous paroxysmal and pressure pain, are not constant enough in themselves to assure a diagnosis, the biopsy, as Max Joseph[20] correctly states, will readily determine the character of the affection, and reduplication of involuntary muscular tissue to the degree of tumor formation, having its origin and development in the skin must be classed myomata cutis, irrespective of its congenital or acquired nature, its traumatic or idiopathic origin, its red, brown, yellow, pink, purplish, translucent or normal skin color, its soft, firm, or elastic consistence, its indolent or painful nature, associated or unassociated telangiectases, multiplicity, distribution, growth and development

CASE REPORTS

CASE 1.—*History.*—Nov 18 1904, J R, tailor, aged 36, presented himself for a painful lesion over the left knee the size of a silver quarter It followed a fall from a bicycle, which the patient received 9 years ago while trying simultaneously to avoid a wagon and a street car coming in opposite directions He was thrown violently against the wagon and sustained a severe contusion of the left knee The injured area was covered with an ecchymosis the size of a silver dollar and accompanied with extensive swelling, confining the patient to his bed for five days and inducing partial disability for almost a subsequent week The ecchymosis underwent the characteristic changes from red to purple and brown, and the adjacent swelling disappeared The central area, however, gradually took on a bluish red discoloration, and in the course of 6 months or a year became enlarged and painful, presenting as nearly as patient can determine its present characteristics

Examination.—Over the external tuberosity of the tibia there was an irregular elliptical area about the size of a silver quarter, bluish red in color, and covered with four or five soft, easily compressible swellings, which presented all the clinical features of tortuous, dilated, superficial veins, and from their appearance prompted the diagnosis of a cavernous angioma of the skin Closer examination also revealed five or six small, rounded, slightly elevated, smooth, glistening nodules, yellowish brown in color, varying from pinhead to a split pea Patient stated that the lesion was the site of severe paroxysmal, lancinating pain, which was easily induced by pressure, but was often spontaneous and induced by such slight causes as the pressure of the undergarments or trouser leg The excruciating

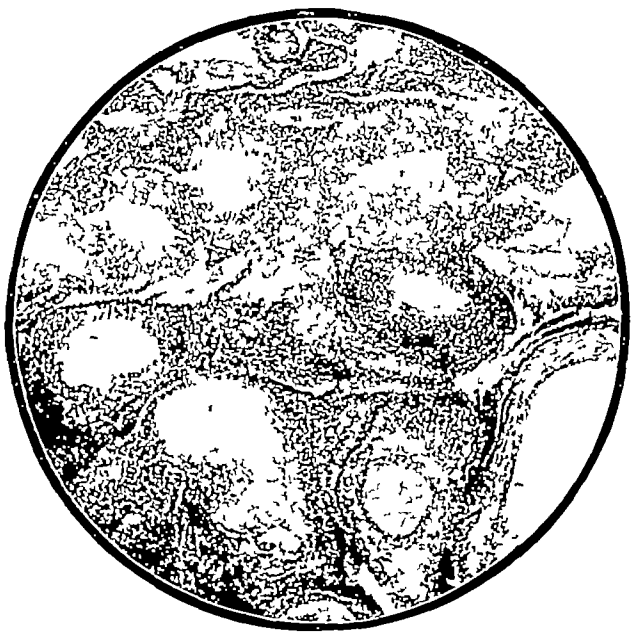

Fig 4.—Case 1 Vascular meshwork of dilated veins partially occluded with inflammatory exudate some completely others incompletely filled with blood taken from the deeper layers of the growth

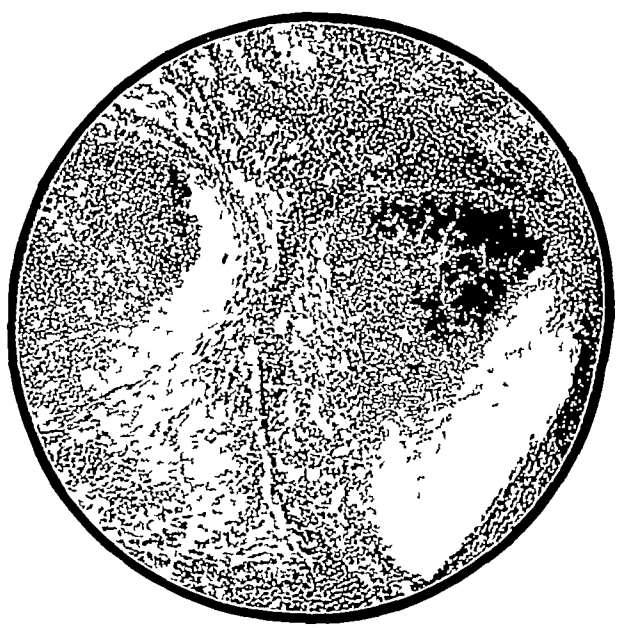

Fig 5.—Case 1 Two large thin walled cavernous vessels partially filled with blood and surrounded with inflammatory exudate taken from the deeper layers of the growth

20 Gutartige Neubildungen Mracek's Handb 1904
30 Wien med Wochschr 1856 p 130

character of the pain induced the patient to seek attention, and the lesion was promptly excised under cocain anesthesia The pains persisted for a short period after the excision, but gradually disappeared, and there has been no recurrence, either of the tumor or pain after an interval of over one year

Histologic Examination—The growth was sectioned in serials and revealed two distinct types of pathologic change Some of the areas presented dense masses of interwoven bundles of involuntary muscular fibers, distributed for the most part in the superficial layer of the cutis, extending to the epidermis, invading the papillæ and entirely obliterating the latter over large areas by pressure atrophy The nuclei of these muscular bundles preserved their characteristic rod shape appearance and were cut variously longitudinally, crosswise and obliquely in accordance with the interlaced distribution of the respective bundles They were imbedded in finely fibrillated protoplasm, with no demarcation between the various cells The general direction of the bundles was for the most part parallel to the surface of the skin In the apparently older, denser and more central areas, they had replaced all other structures, save a few well preserved capillaries, with a moderate amount of endothelial proliferation and perivascular inflammation, and lymph spaces which were widely distended and extensively surrounded with mononuclear lymphocytes The muscular tissue was free from elastic fibers which were well preserved and

Fig 6—Case 2 Myomatous tissue taken from a mixed type of nevus linearis.

abundantly present in the surrounding tissue as far as the confines of the tumor masses (Figs 1 and 2)

Elsewhere in the deeper layers of the corium were areas which consisted of closely aggregated vessels, with their widely distended lumina surrounded by thin walls, filled with circulating blood, or walls thickened with extensive endothelial proliferation, having the character of well preserved mononuclear lymphocytes, until the lumen was partially or completely occluded These intensely vascular areas, which had the appearance of pure venous angio-cavernous tissue were also free from elastic fibers, and often merged with the masses of involuntary muscular tissue (Figs 3 5)

Hair follicles were here and there well preserved in the muscular masses, sweat glands were well preserved, but there was no evidence of sebaceous glands In the more normal appearing outlying areas of the specimen were numerous hair follicles, which on careful examination revealed arrectors pili in various stages of hypertrophy from a single thickened club shape strand to lobulated masses Some of the tumor masses of muscular tissue could also be readily traced to the arrectors of hair follicles, which made it evident that they were the origin This was further confirmed by the normal appearance of the muscular coats of the blood vessels and the absence of any direct connection, as nearly as could be discerned between the muscularis vasorum and the tumor mass There was no well defined muscular net around the free lying sweat glands, and the entire absence of sebaceous glands served to render these structures an improbable origin The only additional pathologic change was a moderate amount of inflammatory infiltration between the muscular cells in limited areas of the tumor mass, consisting chiefly of the mononuclear lymphocytes and epithelioid cells

CASE 2—*History*—H C, aged 10, presented herself March 12, 1900, with a nevus situated over the left portion of the forehead, face, neck and left ear and encroaching to the median line anteriorly on the neck It was present from birth and had undergone no material change

Examination—The lesions on the forehead were linear in form and grouped closely together into a yellowish, slightly elevated patch about the size of a postage stamp The remainder consisted of rounded macules and papules, varying in size from a pinhead to a split pea Some were elevated, rounded and glistening, yellowish and reddish brown in color, others darkly pigmented, firm in character and insensitive to touch Some were soft, purplish or red in color and telangiectic in character The remainder were flat and appeared to be pigmented macules, varying from black to light brown in color The clinical diag

Fig 7—Hypertrophy of involuntary muscular tissue taking its origin from an arrector pili in a case of pityriasis rubra pilaris

nosis was nevus linearis Pain was constantly absent On June 23 1904, patient was seen the second time and the lesions had multiplied enormously in point of number, extending over the left shoulder and down the chest as far as the nipple The appearance and character of the lesions remained the same Pain was constantly absent

Histologic Examination—The lesion on the forehead was shown to be essentially an adenoma of the sebaceous glands The smaller lesions, when examined histologically, revealed a great variety of pathologic change The linear, yellowish, elevated lesions on the forehead bore the structure of an adenoma of the sebaceous glands Pigmented lesions showed a vast amount of pigment in the lower layers of the rete and cells pregnant with same in the stratum papillaris and a general structure similar to the common pigmented mole, with which it bore a deceptive clinical resemblance Others showed larger masses of fibro connective tissue in the corium, similar in structure and appearance to that of a true keloid Others the sarcomatous appearance that is not uncommonly encountered in the ordinary pigmented mole A few lesions which were clinically somewhat warty in appearance bore the structure of a papilloma The lesions which were cli sm vided

firm, slightly elevated, reddish brown in color, and telangiectic in appearance, showed histologically dense masses of interwoven bundles of involuntary muscular fibers, distributed for the most part in the papillary portion of the cutis The elongated nuclei, with rounded extremities were abundantly present and characteristic in appearance and imbedded in faintly fibrillated cellular substance, which was moderately infiltrated with lymphocytes The masses of muscular tissue were well supplied with small vessels, with rather thick muscular coats, the muscular tissue seemed to be distributed for the most part around the larger vessels, and a direct connection was apparently evident at some points, which permitted the origin of the muscular tumor to be attributed to the muscularis vasorum Elastic fibers were well conserved around the mass of involuntary muscular tissue and extended themselves in well defined septa between the interwoven muscular bundles, well preserved hair follicles were present in normal number and appearance and apparently did not share the muscular hypertrophy The arrectors pili were not in evidence Remnants of sebaceous glands were conserved in close proximity of the hair Sweat glands were absent, and the only remaining pathologic change of any note was a moderate dilatation of a few deeper vessels of the cutis (Figs 6 and 7)

These cases present the following clinical and pathologic characteristics The chief clinical feature of Case 1, characteristic of myomata cutis, are the paroxysmal pain, which at times was spontaneous, at times induced by insignificant physical agencies the yellowish red color, firm character, and rounded appearance of the myomatous lesions The bluish red dilatation of the cutaneous vessels, which induced the pre-biopsical diagnosis of cavernous angioma, possesses some degree of confirmatory value, inasmuch as it is reported to accompany a considerable number of the cases thus far recorded The unusual clinical features are the predisposing trauma, the localization of the lesions to a comparatively small area, without evidencing much tendency to multiply in number or increase in size In Case 2 the individual lesions bear a clinical resemblance, in size, color and form, to most of the cases currently reported, and were multiplied materially in number, some of the lesions also showed characteristic telangiectases Unquestionably, from a purely clinical standpoint, it can be grouped with the linear nevi, as evidenced by the clinical appearance, and the histopathology of a large majority of the lesions The entire absence of pain also militated against the clinical diagnosis of myoma Its early development and congenital nature can be regarded as evidence for as well as against its myomatous nature

From a purely pathologic standpoint both cases were unquestionably myomata cutis Both showed interlacing bundles of involuntary muscular fibers, situated for the most part in the upper layers of the cutis, reaching or invading the papillæ and obliterating them by pressure atrophy They contained the characteristic long rod shaped nuclei with rounded extremities, imbedded in a matrix of finely fibrillated protoplasm, with no line of distinct demarcation between the cells The point of origin in the first case was apparently the arrector pili in the second the muscularis vasorum In other words there was a preponderating overgrowth of involuntary muscular fiber, originating and developing in the cutis, i e myomata cutis

MICROSCOPIC EXAMINATION

The diagnosis of myoma cutis in probably the vast majority of cases one might say nearly all the cases has been stumbled on with aid of the microscope In some no diagnosis was essayed until after the histologic examination was completed In not a few the microscope effected a change of diagnosis, from keloid, xanthoma, angioma, zoster, lymphangioma, etc, to myoma, and doubtless *vice versa*, from myoma to other affections Cases without histologic confirmation would doubtless be accorded doubtful classification value Recently I saw a woman, with two small circumscribed patches, the size of a bean, on the lobe of the right ear, each containing a number of glistening, elevated, translucent papules, of two years' duration, which failed to exude any fluid on puncture The affected ear was the site of severe paroxysmal pain, of spontaneous nature My diagnosis wavered between myoma and lymphangioma, in favor of the former, until the latter diagnosis was confirmed by histologic examination

In an affection of this character, in which the microscope plays the essential and important rôle in establishing the diagnosis beyond a question of mere conjecture reduplication of involuntary muscular tissue to the degree of tumor formation must be classed myoma cutis, irrespective of its congenital or acquired nature, idiopathic or traumatic origin, its red, yellow, brown, pink, translucent or normal skin color its firm, soft, or elastic consistence, its single or multiple character, its development from arrectors pili, tunica media vasorum, or glandular elements, its simple character or associated hypertrophy of blood or lymph vessels, or other elements These associated conditions may be qualified by such attributive terms as solitary, multiple, congenital acquired, traumatic, idiopathic, lympho, angio fibro, etc If these considerations are properly observed, the total number of cases is materially increased, and the affection, though doubtless frequently overlooked, or mistaken for other cutaneous affections, is not as uncommon as certain well accepted reports indicate

Simple hypertrophy of involuntary muscular fiber is by no means uncommon It accompanies many of the chronic inflammations of the skin, particularly those which are accompanied with chronic cutis anserina, and creepy and chilly sensations I have found it constantly associated with pityriasis rubra pilaris, and present in severe cases to an extreme degree Likewise in porokeratosis chronic dermatitis and other chronic paresthetic cutaneous affections If its simple hypertrophy is easily affected by often slight and dissociated influences, its overgrowth from direct or special agencies is not unlikely

Of special interest in this direction are the experiments of Vignolo Lutati[31] on animals in reference to the effect of intoxications of the general metabolism on the involuntary muscular fibers and their karyonetic response to stimulating influences Many cases are reported in the literature without histologic examination, and reported under the head of lymphangioma lymphangioma cysticum angioma xanthoma, keloid etc, some with some without histologic reports, that doubtless may have found a place for themselves, with careful and proper observation under the classification of myomata A very conservative estimate of well defined cases worthy of general acceptance, will readily place the number of cases which can be enumerated at the present day, at thirty and possibly forty

From our present state of knowledge, the diagnosis must depend largely on the pathologic findings At least this is the opinion which is most generally expressed and which has received the most ready accept-

31 Arch f Derm u Syph., lviii p 323

ance Those who reserve for the affection a purely clinical classification, admit in a measure its shortcomings, one of the most representative of these, Crocker,[2] states

With all these variations in symptomatology it is difficult to find any one symptom absolutely constant, but on the whole the most characteristic features are The extremely slow and progressive development of the tumors in number and size, the tendency to group into close and semicoalescing patches, and their asymmetrical distributions, the moderate size attained by the tumors, which were seldom larger than a pea, the dull red color, and firm consistence of the tumors, with a normal epidermis over them, and their mobility over subjacent parts, their painless character at first with the subsequent strong tendency to most severe paroxysmal spontaneous and provoked pains, and finally they do not recur on removal

These symptoms, singly and collectively, are not absolutely characteristic of the affection Each occurs in other affections, and may be entirely absent in myoma, all collectively present, without a pathologic confirmation, could not establish beyond reasonable question the diagnosis Pain is absent in probably one-half the cases, and when present may be attributed to neuromata or other forms of painful new growths Wolters'[20] second cases developed acutely and showed a symmetrical distribution The lesion in Miglionini's[11] case was single, as large as a hazel-nut, and situated on the knuckle Herzog's[12] was single, on the cheek, Forster,[6] Sokolow,[7] Santesson[10] and Axel-Key[18] were all solitary cases Jarisch's[17] case was probably of congenital origin, and Wolter's[20] third case situated over a meningocele, can likewise be attributed a similar origin The remaining clinical features are sufficiently varied to require no special comment

The histogenesis of myomata cutis presents some features, which are scarcely less interesting, because of their varied character, than the clinical history Those who have made histologic studies in this direction are about equally divided in their results a fairly representative number express their conviction that the derivation of the muscular overgrowth can be traced to the muscular coats of the vessels of the skin, arrectors pili, or the muscular appendages of glandular elements the remainder frankly admit that their painstaking efforts in establishing a true derivation have been negative in character or purely conjectural Jadassohn,[25] in his second case, Roberts,[4] Nobl,[32] Neumann,[27] Marschalko,[14] Audry,[9] Broelemann[33] attribute the derivation to the arrectors pili, Crocker,[2] Jadassohn[25] in his first case, Hardaway[34] and Hess[16] to the muscular coats of capillaries, Wolters, Brigidi and Maracacci[26] to the involuntary muscular fibers of the glandular elements and hair follicles Krzysztalowicz[19] admits his inability to arrive at any definite opinion, but the peripheral portions bore evidence of arrector pili derivation Jarisch[17] and Lukasiewicz'[13] derivations are indeterminate as respects arrectors pili, glands, or blood vessels Huldschinsky[5] attributes to the blood vessels a probable derivation Wolters[20] attributes the probable derivation of his third case to the capillaries, although glandular elements were sparingly in evidence, and a portion of the growth could be readily traced to arrectors pili Interesting, if not amusing, is the latter's conjectural explanation of the growth and development of the myoma which was seated over a meningocele, on the basis of a compensatory hypertrophy, on the part of Nature to arrest the efforts of the pulsating meningocele to effect a rupture Personal observation leads me to suspect from the peripheral appearance that the arrectors pili fostered strongly the myomatous hypertrophy in the first case and the musculi vasorum in the second

It is impossible to determine, however, beyond purely conjectural speculation, whether the muscular hypertrophy had its origin and development in these two respective areas, or whether these structural areas yielded to the general stimulus, which expended itself on all involuntary muscular tissue of the affected area, in degree proportionate to the amount of each present, and its more favored distribution The latter explanation seems to be the more plausible one, and is analogous to the hypertrophy of all glanduar and epithelial tissue in the immediate neighborhood of an epithelioma, which owes its overgrowth to a similar form of stimulating influence

On this basis the diversified character of the histogenesis, from glands, arrectors pili, vessels, and all forms of involuntary muscular tissue, is readily explained All the diversified clinical and physical phenomena find their best explanation on the basis of some such unknown influence, which stimulates the involuntary muscular tissue of the skin to a preponderating development and overgrowth, irrespective of age, area, predisposing causes, and similar inconstant conditions

The tendency may be inherited, present from birth, and called into activity by the influences of puberty trauma, etc Inasmuch as all tissue in general is subject to similar changes, involuntary muscular tissue is probably no exception, and doubtless shares in all the variations of pathologic change, from single hypertrophy to preponderating and irregular conglomerate overgrowth, with all the corresponding gradations of clinical and physical change In that event the microscope affords the easiest, best and most accurate determination as regards what constitutes, in a generally accepted sense, myomata cutis [35]

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32. Arch. f Derm u Syph 1906 lxxix, p 31
33 Arch f Derm u Syph 1904 p. 103
34 Am Jour Med Sci April 1886 p 511 also Jour Cut Dis 1904 p 375

35 For further literature the reader is referred to Arzovan and Vaillard Ann. de Derm et. Syph. 1881 p 60 Fox Brit. Jour Derm 1902 p 56 Klob Path Anat. d Weibl Sexualorg 1864 p 482 Vidal Jour Cut. Dis 1885

LATE PHLEBITIS FOLLOWING CLEAN ABDOMINAL OPERATIONS

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Many surgeons have seen iliac and crural phlebitis develop from the tenth to the twentieth day (usually about two weeks) after abdominal operation which had been aseptic throughout and followed by prompt and perfect healing of the wound

A disease which appears so unexpectedly and converts a simple operation, with the promise of speedy recovery, into one of suffering, inconvenience and prolonged confinement and disability, merits further study and consideration Though seldom fatal, it is always a most unwelcome complication and a vexatious disappointment to both patient and surgeon

The typical cases seem to occur after an interval operation, for example, a clean appendectomy

In 1903 I expressed the opinion[1] that I had never seen

1 'The Sequels and Complications of Appendicitis Colorado Medicine April 1903

a case of iliac or femoral phlebitis after an abdominal, rectal or genitourinary operation that was not due to infection Sepsis, I considered, the commonest cause, even if the operative field did not seem to justify it Further observation and experience compels me to modify this opinion

The manifest, acute, septic phlebitis, attending or soon following operations, is not considered in this paper

I wish to discuss especially that form of phlebitis culminating in the veins of the legs and known to occur most frequently about two weeks after simple aseptic abdominal operations, without being preceded by fast pulse, elevation of temperature, pain or any indication of its advent In the great majority of cases it culminates in the vessels of the left leg, no matter where incision is made

Cordier[2] collected 232 cases, of these, about 200 were intra-abdominal operations and 166 clean cases, hysterectomy, for uterine fibroids leading in order of frequency with appendectomy next. While this form of phlebitis occurs occasionally in many other diseased conditions, it so far seems peculiarly incident to abdominal operations

The cases of pulmonary embolism occurring soon after severe abdominal operations, usually hysterectomy for large uterine fibroids, are interesting and distressing, but are hardly to be considered in connection with femoral and saphenous phlebitis In this class of cases pulmonary embolism is very rare

Mr Haward[3] presents statistics from five London hospitals of 3,334 operations for appendicitis, with 29 cases of phlebitis and 8 of pulmonary embolism, showing about 1 per cent in this class of operations In the last few years I have had two cases follow operations for appendicitis In one acute case, in which the operation was clean because of early intervention, phlebitis of a mild character occurred in both legs three weeks later The other case was one of chronic appendicitis, with the following history

History—Mrs G, aged 37, married, had one child eight years old Labor was natural and convalescence uneventful She has not been pregnant since She has always been thin and for the last year or two she has been anemic and neurasthenic Her appetite is uncertain and she is troubled much with indigestion and flatulence In the spring of 1905 she had occasional attacks of abdominal pain followed by tenderness over the appendix These continued until she was examined by me in January, 1906, when a diagnosis of chronic appendicitis was made and I operated on her January 27 She also had retrodisplacement of the uterus, with no adhesions or discomfort, she never had inflammation of uterus or appendages

Operation—The appendix was removed through a short central incision, and at the same time I did a ventrofixation Both were done quickly and without the least difficulty There were no adhesions about the appendix. It was distended throughout with liquid fecal matter and was congested in the proximal half, but the tip was pale and almost bloodless The appendix was ligated close to the cecum, the stump cleaned with peroxid of hydrogen and salt solution and pouched with one circular stitch In fixing the anterior surface of the fundus uteri to the lower angle of the wound, care was used not to puncture the sheaths of the recti, the object being not to damage the epigastric veins which lie beneath the muscles, in fact, it was not necessary to ligate a single vein during the operation

Postoperative History—The wound healed promptly, perfectly and permanently There was not the slightest interruption to a smooth and satisfactory convalescense On the second day the temperature was 99 2, after this, from January 28 to February 8, it varied from 98 5 to 98 7 and the pulse was about 75 The kidneys were acting normally at all times, and constipation was prevented by enemas and an occasional simple laxative There was indigestion during the first two or three days after operation On February 8, twelve days after operation, the temperature in the evening was 99 2 and pulse 80 At same time she complained of tenderness and pain, which were quite severe in the left calf and under the instep, and lastly in the groin, showing unmistakable phlebitis Next day the temperature and pulse were normal.

On February 10, temperature was 99 2 and pulse 80 After this date both continued practically normal, but the pain and swelling of the leg continued The leg was treated by slight elevation, wrapped in cotton and loosely bandaged until the fourth week, when rubbing and gentle massage were commenced and continued daily until convalescence was well advanced. It was two months before the patient could use the leg with comfort She has since worn an elastic stocking The swelling of the entire leg was decided, but never extreme. The woman's general health has steadily improved and she walks without discomfort

ETIOLOGY

What caused the phlebitis in this and similar cases? The field of operation was clean throughout, the epigastric vessels were not injured, the wound was not stretched, and there was no undue or uncomfortable pressure of the abdomen by bandage Traumatism, therefore, must be excluded With our present knowledge, pathogenic bacteria, it seems to me, must be excluded The phlebitis may have been caused by some albuminoid substance or toxin in the blood, as suggested by Welch and later by Meyer and others, but it would be exceedingly difficult to account for the presence of infective bacteria in such a case It is admitted that whatever damages the endothelium of the veins, whether trauma or a morbid state of the blood, favors the formation of thrombi In my experience the patients are usually anemic, with feeble circulation I believe that a condition of the blood exists previous to operation which predisposes to thrombophlebitis This blood state is not always apparent.

In the great majority of cases the veins of the left leg only are affected Why should a clean operation in the right hypogastrium cause phlebitis in the left leg only? The anatomic arrangement of the blood vessels, I believe, offers the best solution

Keen, in his "Surgery of Typhoid Fever," states that about three-fourths of the cases are in the left leg (other authorities give a larger proportion) He believes that it is due to feeble heart action and to the mechanical arrangement of the vessels—the passing of the left common iliac vein beneath the right common iliac artery Haward adds the fact that the left common iliac vein also passes beneath the left internal iliac artery The typhoid state, however, with its long period of recumbency, high temperature and marked debility is different from that under consideration, yet the peculiar arrangement of the vessels is doubtless a factor to be considered in the development of the disease The thrombus may be the cause or result of the phlebitis

It is also conceded by many that some cases are exceedingly difficult of explanation, and, I may add, with our present knowledge impossible of satisfactory explanation

2. THE JOURNAL A. M. A. Dec. 9 1905
3 Hunterian Lectures 'Phlebitis and Thrombosis, Lancet March 10 and 17 1906

SUMMARY OF LITERATURE

Witzel of Bonn[4] reports three cases that he could not account for following clean appendectomies He now believes that the condition originates in the epigastric veins and is due to ligation of the epigastric vein and artery during the operation He therefore would make a more perpendicular incision and would not open the sheath of the rectus muscle, nor ligate the epigastric vessels, nor suture *en masse*

Stephen Hoffman,[5] in a paper on blood vessel complications in perityphlitis states that thrombosis and embolism are complications of appendicitis, and that thrombosis may be primary in the veins and is not very rare. He notes as a "singular fact" that it most frequently affects the veins of the left side, and suggests the anatomic arrangement of the vessels and pressure as the explanation.

Lennander of Upsala,[6] had five cases following appendectomy He considers the phlebitis of infectious origin, but states that it need not start from field of operation He states that the compression by dressings, intestinal intoxication and feeble circulation may be factors

Lockwood[7] states "The prognosis of phlebitis is favorable when not complicated with septicemia and pyemia," an admission that some cases are not septic.

Coe[8] speaks of septic crural thrombosis following aseptic celiotomy

Vander Veer[9] says regarding non septic phlebitis following abdominal operations that the probable causes are Traumatism, distribution of veins of left leg and bandage pressure

Secord[10] of Ontario speaks of thrombosis of femoral veins following aseptic laparotomy

He says that lessened vascular tension, retarded circulation and dressing pressure are causes It is not due to infection.

Strauch, of Moscow, (quoted by Secord), says that ether and high pelvis position are causes of femoral thrombosis

John G Clark[11] speaks of this form of phlebitis occurring as a sequel to celiotomy It originates, he says, from a primary thrombus of the deep epigastric vein which is slowly propagated along the vessel until it reaches the external iliac, where it gives rise to retrogressive thrombus of the femoral vein It is non infectious and non traumatic.

Willy Meyer[12] mentions two cases following appendectomy Both patients were anemic. Intestinal intoxication and sigmoid pressure, he says, may be contributory causes. The condition is of infectious origin, but not necessarily from the field of operation A letter from Dr Meyer in June, 1906, re *affirms his belief in infection as a cause*

Edwards[13] speaks of phlebitis, thrombosis and embolism following abdominal and pelvic operations He declares that the condition is not septic. He believes that it is caused chiefly by suddenly formed clots becoming detached and causing pulmonary embolism and sudden death It usually occurs in cases of hysterectomy from uterine fibroids

Maurice Richardson,[14] of Boston, says that this thrombosis of the veins of the left calf may be the result of wound infection, but that such an explanation seems against common sense and experience The common phlebitis, he believes, occurs most frequently in those patients whose wounds have pursued a uniformly favorable and aseptic course

At the annual meeting of the American Gynecological Society,[15] May 22 24, 1906, Dr Joseph Taber Johnson, Washington, D C, read a paper entitled "Thrombosis and Embolism Following Abdominal Operations," Dr Eugene Boise, Grand Rapids, Mich, read a paper on "Postoperative Embolism" In the discussion following Noble, Philadelphia, said that he does not think that sepsis has much to do with the condition, much is yet to be learned about it There are many factors and trauma plays a part.

Reynolds, Boston, said that he thinks that congestion of pelvic viscera has much to do with thrombophlebitis after operations on these organs.

Currier, New York, declared that we are in the dark as to the exact cause, but believes that patients getting up too soon, say within a week, is dangerous and predisposes to thrombosis

Watkins, Chicago, said that the evidence is much in favor of infection

Dührssen, Berlin, thinks it is caused by a blood dyscrasia, not by sepsis

Edebohls, New York, said that in ten cases none was septic.

Newman, Chicago, said that susceptibility from previous weakness and trauma figure as causes

J C Munro[16] suggests that phlebitis is more common than postmortem statistics indicate He believes that mild infections do take place from which the patient recovers spontaneously

C H Goodrich,[17] among the causes of femoral phlebitis, mentions infection of the blood clot in or about the superficial or deep epigastric or circumflex iliac veins by attenuated forms of bacteria In most cases, he says, some trauma to veins is probably a contributing factor None will dispute that a blood clot, an ideal culture medium, can be infected by a smaller number and less active bacteria than tissues possessing resistive power

Welch[18] says "Many of these so called marantic thrombi are unquestionably of infective origin, and while a more prominent place must be assigned to the action of micro-organisms in the etiology, yet recent attempts to refer all thromboses, formerly called marantic, to the direct invasion of micro organisms and to phlebitis go beyond demonstrated facts"

Clark and Haward quote with favor von Recklinghausen's whirlpool theory or eddying of the blood as predisposing to blood clot, maintaining that this result is favored by the cross currents under varying pressure and at different angles When at or near a common receptacle, the influence may be marked, and if the heart action is slow and feeble, it may be influential in the cause of thrombus This is but another factor in the consideration of the anatomic plan of the vessels in influencing the formation of thrombi

From the teachings of Virchow that the thrombosis was the primary essential condition and due to slow, feeble circulation, we have witnessed in more recent years the growth and ascendency of the theory of infectious origin, due largely, as shown by Professor Welch, to the investigations of European pathologists

Much has been written in the last few years about the blood plates, whether they were degenerated blood corpuscles or inherent constituent elements of the blood In the Hunterian lectures on phlebitis and thrombosis, previously alluded to,[2] considerable space is given to this discussion The investigations of Eberth and Schimmelbusch and others established their prominent influence in coagulation, while Bizzozero and Osler confirm their existence as independent elements in solution with the blood corpuscles

According to different investigators, from Osler, Brodie and Russell, to Professor Kemp, they number from 250,000 to 778,000 to the cubic millimeter Their marked influence in the formation of blood clot seems established Whatever retards or slows the circulation, regardless of local and constitutional conditions, disturbs the normal relation of the elements to each other and

4 Centrblb f Chir July 15 1906
5 Deutsch. Ztschr f. Chir vol lxxxi
6 Centrlbl f Chir 1899
7 Pathology and Surgery of Appendix 1901
8 Medical News, July 1 1899
9 American Medicine July 1901
10 Secord Amer Gyn October 1903 p 370
11 Etiology of Femoral Postoperative Thrombophlebitis Univ of Penn Med Bull July 1902
12 Annals of Surgery May 1901
13 International Clinics vol iv Series 15 1906
14 Certain Unavoidable Calamities Following Surgical Operations Boston Med and Surg Jour Dec 1 1904
15 THE JOURNAL A. M. A June 9 1906 page 1701
16 Lymphatic and Hepatic Infection of Appendicitis Annals of Surgery November
17 Brooklyn Med. Jour June, 1907
18 Allbutt's System of Medicine,

to the endothelium. In chlorosis and other conditions of deficient oxygen in the blood, the platelets increase, leave the center of the current and, with the corpuscles, collect in the periphery of the stream, and with their known property of agglutination, attach themselves to each other and to the endothelium and form the nucleus of a clot. Prof. James H. Wright,[19] of Boston, has discovered the origin of the blood plates in the giant cells of the bone marrow and of the spleen. Constitutional conditions affecting the chemistry of the blood and local condition of the vessels will produce the same results, especially with a feeble or retarded heart action. Under such conditions the fibrin ferment is claimed, is evolved and the tendency to thrombus favored.

The calcium and sodium compounds and thyroid extract are administered to increase the agglutinative conditions of the blood and to shorten the period of coagulation in order to prevent hemorrhage during and after operation. This is perfectly consistent with Professor Wright's (London) observations that citric acid causes decalcification of the blood, and that the blood of the femoral veins, containing more carbonic acid, is more susceptible to coagulation than the sinuses, at the base of the brain.

With the foregoing data and general observations, we ought to be better prepared to form an intelligent opinion in a given case as to the causes and blood conditions which favor thrombophlebitis after operations. Because few patients die, the pathologist has not had a good opportunity to do his best work. The influence of trauma as a factor is emphasized by such men as Lennander, Witzel, Thienhaus, Vander Veer, Baldy, Goodrich, and most of them, at least, recommend the Trendelenburg position as a preventive measure in addition to precautions, which all prudent surgeons recognize, against the infliction of needless force and trauma during the operation.

OPINIONS OF SURGEONS AND PHYSICIANS

In my examination of the subject I sent the following inquiry, in June and July, to about 30 distinguished surgeons and physicians: "What in your opinion is the chief cause of phlebitis following abnormal operations (occurring usually from the tenth to the twentieth day) with little or no fever an aseptic field and prompt healing of the wound? Interval appendectomy is a good illustration," I quote from replies received.

Prof. W. H. Welch: "In my article on 'Thrombosis' in Allbutt's System of Medicine, (Vol. VI), I discuss the view which has many adherents, particularly in France, that many of the thrombi formerly regarded as marantic or bland are really instances of infective phlebitis, and the discussion applies to the class of thrombi following abdominal operations, to which you refer, although surgical thromboses, as such, are excluded from the scope of my article, which relates to internal medicine. The etiology of the class of thrombi which you are considering is not well understood. The opportunities to make bacteriologic examinations of such thrombi are infrequent, but, as I state in my article, in a number of cases bacteria have been found in such thrombi, and this raises some presumption in favor of their infective origin. Still, I do not consider such an origin as by any means established. The absence of evidences of infection in the seat of operation does not preclude the possibility of the infectious origin of the thrombi, nor does the bland course of the thrombotic process exclude this. The symptoms (fever, rapid pulse, etc.), in some of the cases are suggestive of infection, and on the whole, I incline to this hypothesis, which, in at least some instances, seems established."

J. C. Bloodgood, Baltimore, does not consider the causation definitely settled, but thinks the origin infectious. It is much more frequently observed in anemic and chlorotic individuals.

James M. Finney, Baltimore, believes that there is no one specific cause but several contributory causes, the most important of which is the condition and chemistry, of the blood itself. Add to this slight traumatism to the iliac vein, usually the left, through pressure from fecal impaction in rectum, metal retractors, rough use of the rectal tube, etc., and you have the factors necessary for its production. Infection may play a remote part, but the real change, whatever it may be, is, in his opinion, a chemical one, in the cases under consideration.

Robert Abbe, New York, says: "The cause of postoperative femoral phlebitis is probably not different from that following typhoid or other fevers—retarded current in the left femoral, which shows in three fourths of the cases, due to pressure on the right common iliac artery on the vein which crosses beneath it at the pelvic brim. This, plus the bacterially infected blood, even in wounds healing by primary union without apparent infection, causes colonization on the vein wall when the current is slowed down."

Clement Cleveland, New York, formed the opinion long ago that even the mildest forms of phlebitis are due to slight sepsis, and later experience has confirmed this view. He is unable to account for it in any other way.

Robert T. Morris, New York, thinks that the phlebitis is due to infection by way of the peritoneal lymphatics, but none of the writers has given a very clear view of the process. The matter needs explanation. He has had two cases of left and two of right iliac and femoral phlebitis following appendectomy without other infection in the cases.

John B. Roberts, Philadelphia, is inclined to attribute the condition to a mild form of infection of the veins, and the same thing, he says, is probably the cause of venous thrombosis that occasionally occurs as a complication of typhoid fever.

John B. Deaver, Philadelphia, says: "Infection is the cause."

Joseph Price, Philadelphia, says: "Stump or pedicle operations and local infection. The appendix operation is the perfect type to demonstrate that it is septic, because nearly all are imperfect operations. A dead ligature in a dead space undermined, with one sixth or one eighth of the appendix not removed. Those who cut out the stump and close the hole never have phlebitis."

J. M. Baldy, Philadelphia, thinks that it is impossible to tell the chief cause. Sepsis is the cause in only a few cases. Traumatism is a factor. Pressure on vein by retractors may be a potent cause, and anemia due to loss of blood, and also to disorganized blood from other causes, are also factors.

L. S. McMurtry, Louisville, says that he has had three cases following nonseptic abdominal operations. In each case the left leg only was affected. He regards the etiology as probably a mild local infection causing inflammation of the vein, and formation of a clot, but is not clear as to the cause and pathology.

Maurice Richardson, Boston, says that he has seen a great many cases of the kind, and is strongly inclined to the view that this mild phlebitis is no evidence of sepsis. It occurs in the cleanest cases attended by a slight rise in temperature. Little, if any, disability follows. Sometimes he has thought the trouble came from keeping the patients very still. He has never seen pulmonary embolism in these cases. He has no idea as to the cause of the phlebitis.

Arthur T. Cabot, Boston, says that he has not been able to discover any explanation for the cases of phlebitis under consideration. He has several times seen cases of what seemed to be phlebitis in the deep veins of the calf of the leg after operations, and thought they might be in some way due to pressure of the calf from the Trendelenburg position, but confesses he has no very good reason for holding this opinion.

N. Senn, Chicago, says that his experiments on animals several years ago tended to show that thrombosis is not likely to occur without infection. Developing after an operation, it is

19. Boston Med. and Surg. Jour., June 7, 1906.

suggestive of a mild form of infection, or in consequence of an enfeebled circulation He has not observed it in appendix operations

J B Murphy, Chicago, does not believe that phlebitis is more common following abdominal than operations on other parts of the body He thinks it is a stasis caused from placing the patient in the recumbent position

A J Ochsner, Chicago, says that two explanations seem somewhat reasonable, though he is entirely unable to state the reasons for the occurrence of the disease One is given by Witzel, and the other is that the disease usually occurs in patients whose blood is not quite normal

W J Mayo, Rochester, Minn, believes that there are several factors in the etiology Phelebitis does not occur as a rule unless the peritoneal cavity is opened, thus arousing a process which results in some blood change, and this is instrumental in causing phlebitis The recumbent position is a factor While formerly common in interval appendectomies, when patients were in bed two or three weeks, it is now uncommon since patients are allowed to get up in six days, and are instructed to move their limbs freely On this account the Mayos aim in abdominal cases to get the patients up in ten or twelve days

Roswell Park, Buffalo, N Y, in the cases under consideration, thinks that the early condition is one of endophlebitis which may be of toxic origin, or an indistinct mild form of sepsis The handling of viscera or clamping of vessels by forceps may commence the thrombotic process While microorganisms are more or less at fault, it does not follow that the condition is necessarily other than thrombus produced by chemical rather than biochemical means He believes that a mild type of thrombophlebitis is the not infrequent sequel of abdominal operations, and that it is due to chemical agencies in the blood rather than to active germ action, and that it is mildly, if at all, infective The condition, at times, is most difficult of explanation

Arpad G Gerster, New York, states that the question is not so simple as many would imagine Several factors are to be considered In some faultless cases the thrombosis is due to a ligated pelvic vein, in which the thrombosis extends to the femoral, but the condition of the blood and the endothelium of the vessels has some direct influence on the thrombotic process Another factor is inaction due to bed rest, and the low blood pressure due to lack of physiologic stimulus to the heart The coagulability of the blood and the state of the endothelium he thinks are most important

Joseph G Blake, New York, believes that the condition is due to an extension of a phlebitis in the neighborhood of the wound across the abdomen through a transverse vein of the abdominal wall which empties directly into the external iliac vein The original phlebitis he thinks is probably due to injury to the walls of the vein through traction

A W Vander Veer, Albany, N Y, says that he is not clear as to the pathology In the plainest cases traumatism is produced which extends to the venous trunk. The clumsy use of retractors will produce injury which is reflected to the veins Just why a case of appendicitis, complicated with a lesion of right ovary and tube, should cause a phlebitis of the left leg he is at loss to explain

CONCLUSION

My belief is that the cause of phlebitis of the epigastric, iliac, femoral, saphenous and tibial vessels, occurring late after a perfectly aseptic operation, with prompt healing of the wound is probably not septic

We do not know the specific cause or causes The cases, of which a good illustration is reported, with our present knowledge, are very difficult of satisfactory explanation

In the absence of convincing or pathologic evidence, and in the face of profound surgical skepticism, it is not rational, in the best and cleanest days known to surgery, to assume an infection that is devoid of satisfactory evidence

The condition which causes the thrombus, before the inflammation, or of the phlebitis, preceding the thrombus, is the vital question It is exceedingly difficult, in fact, quite impossible, to reconcile the facts with the recumbent position, the simple ligature or injury of small veins, in a distant field, often on the opposite side of the body, though admitting that infection need not come from the site of operation

I believe that there is a general condition affecting the composition of the blood, that may, and often does, exist before operation, which is an essential factor in the cause of thrombophlebitis in these cases A careful scrutiny of patients should be made before operation, and an examination of the blood should be made before and after operation This on a fairly liberal scale, in my opinion, would reveal interesting and useful information, and shed some light on a puzzling subject

If the patient is chlorotic and anemic, or if the conditions are not satisfactory, the health should be improved, if delay is permissible, by the administration of iron and acids, and metabolism improved by a suitable food supply, while specific or constitutional affections should, as usual, receive just consideration

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A SERIES OF MEDICAL AND SURGICAL AFFECTIONS TREATED BY ARTIFICIAL AUTOINOCULATION

ACCORDING TO WRIGHT'S THEORY OF OPSONINS *

A P OHLMACHER, M.D
DETROIT

It is somewhat surprising, in view of the remarkable character of the results which have been obtained, that an appreciation of the full value of Sir A E Wright's theory and practice is not widely disseminated among the medical profession of the United States Rarely, indeed, in these days of easy publicity, does a scientist effect an accomplishment of far-reaching humanitarian importance without its immediate and extensive proclamation throughout the civilized world In fact, such proclamation, especially of discoveries in the healing art, is too often premature and over-colored, with the result that disappointment and pessimism are aroused and progress impeded With Professor Wright, however, the situation is quite the opposite He has for four or five years patiently worked along a new line in experimental medicine, has evolved an attractive working hypothesis, the application of which has performed veritable miracles in the cure of certain diseases, and all of this with scarcely a ripple of sensation and almost without the knowledge of the medical profession outside of the originator's immediate circle For Wright is accomplishing results that are the surprise of those who have been so fortunate as to witness them, and the comparatively uncommon worker who is, by previous training, competent to apply Wright's methods in practice, and who has employed them, is also performing therapeutic feats of a most surprising kind To a large degree this situation has resulted from the principal investigator's natural modesty, and in part has been due to the conservatism of the medical profession representing the reaction after a number of sensational but unproductive announcements But the day when Professor Wright's achievements are to remain hidden has passed in England and in the United States we are on the verge of a similar

* Read by invitation before the Chicago Medical Society, Jan 10, 1907

illumination, thanks largely to the visit which Wright recently paid to America and also to the remarkable eulogy accorded his work by our most distinguished medical scientist, Professor William H Welch It is, therefore, a pleasure of more than ordinary degree that I feel in bringing to the American medical profession an account of what it has been my lot to effect in applying, in a small way, the methods of Wright to the treatment of certain medical and surgical affections

It is not my purpose to go into theoretic or technical details, for I am convinced that the appreciation of Wright's conquests has been retarded in the United States by the publication of several papers too severely and too needlessly abstruse, with the result that a comparatively simple theory and the excellent results of its application have been rendered confusing and unattractive to the average medical man To the physician or surgeon whose interest lies in learning as speedily as possible what can be accomplished by Wright's methods in curing disease it matters not how opsonins may be related to agglutinins, bacteriolysins or precipitins, or whether Ehrlich's side chain hypothesis can be made elastic enough to reconcile opsonins with amboceptors, complements, complementoids, or what not. In fact, because of the industrious quest of Ehrlich's hypothesis by workers in all parts of the civilized world during the last six to eight years, with the voluminous and increasingly complex literature, and the failure to obtain out of all this work an additional remedy for a single infectious disease, the work-a-day physician has lost interest in the theoretic controversies of biologic medicine. But the fashion of theories and standards is on us, and to-day no one proposes a new kind of biologic therapy without formulating some theoretic basis as its foundation, or advocates a biologic remedy without proposing a method of standardizing it. Unfortunately, too, the theory and standard are often as fallacious as the treatment is inefficient It may or may not have been some such consideration as this which led Wright to propound his theory of opsonins to explain the beneficial results following his use of small, infrequent bacterial inoculations to cure the corresponding subacute or chronic infection, and perhaps he may have laid more stress on the opsonic index and the exact enumeration of the bacteria in a given dose than further experience will warrant Be that as it may, a most attractive theory has been propounded, an ingenious technic for testing this theory has been perfected, and with what has already been accomplished in successful therapy no intelligent physician will fail to acquaint himself Accordingly, I shall digress sufficiently to lay before you a brief, and I hope comprehensible, outline of the theory of opsonins and of opsonic therapy

THE OPSONIC METHOD

By the ingenious methods of Wright and his associates, Leishman and Douglas, it is possible to study experimentally, outside of the living body, the action of the blood serum called opsonic If one takes fresh blood of man or any other common mammal and washes the corpuscles free from serum, the polymorphonuclear leucocytes will not ingest such pathogenic bacteria as the pyogenic cocci, colon bacilli, or tubercle bacilli when these are mixed in the form of a fluid suspension with the washed corpuscles and incubated 15 to 30 minutes If, however, to this mixture of washed corpuscles and bacteria blood serum be added, the phagocytic leucocytes at once begin to take up the bacteria, and, in proportion to the opsonic power of that particular serum against that particular kind of bacterial parasite, the number of bacteria engulfed by a given number of leucocytes in a certain period of incubation will vary In virtue of its opsonin, which sensitizes the bacteria so as to allow the white blood cells to take them up by phagocytosis, the blood serum produces the effect just described Against a given pathogenic microbe, as, for example, the *Staphylococcus aureus*, the serum of one individual tested by a refinement of the method just outlined will permit the leucocytes to take up an average number of the cocci, the number representing this individual phagocytic index for staphylococcus The relation which exists between the phagocytic index of one individual and that of others presumably normal constitutes the so-called opsonic index This opsonic index assumes practical importance because it seems to bear a definite relation to an individual's resistance against a given disease-producing microbe With subacute and chronic infections the opsonic index is usually low for the corresponding bacterial species

In view of the practical feature of this report which aims to present the actual clinical results which I have obtained in applying Wright's principles to the treatment of certain diseases, it will not be possible to enter further into the matter of technic by which opsonic determinations are actually made For information on this head and for much enlightenment concerning the treatment of certain infections on the basis of the opsonic theory the full and free publication which Wright and his associates have given, during the last three years, in the Proceedings of the Royal Society, the London *Lancet* and the *British Medical Journal* should be consulted

I have said that the opsonic theory as a theory may, like other hypotheses in biologic science, be open to question, and it would be unwise to assert that it may not be considerably modified or even overthrown by accumulating experience Had it been the promulgation of this theory of immunity alone, with its interesting laboratory test, that ended Wright's labors, there would be less excuse for bringing it to the attention of practicing physicians In reality, however, the *practice* on which the theory of opsonins may be said to rest is the truly valuable contribution which Wright has given to the medical world While it may still be too early to predict the ultimate bounds which will surround opsonic therapy, there is evidence that we have come into possession of a method of treatment which opens another of the several important eras in the conquest of human disease by medical science.

OPSONIC THERAPY

Wright has shown that by artificial bacterial autoinoculation one may increase resistance against the corresponding organism to a point at which healing of infectious processes occurs The bare fact that immunity could be induced or heightened by the use of pathogenic bacteria or their products had been established and extended from the day of Pasteur's epoch-making studies in the bacteriology of infectious diseases, and from Buchner's day it was shown that the blood serum bore an important part in the body's combat against microparasites, while the rôle of the living body cell was demonstrated by the brilliant Metchnikoff But figuratively it remained for Wright to so modify the vaccine of Pasteur as to arouse in the serum of Buchner a substance which prepared the disease-producing microbe for destruction by the phagocyte of Metchnikoff, thus

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In practice Wright employs small, infrequent injections of what he calls by the rather unfortunate name "vaccine," to treat the corresponding bacterial disease His vaccines consist of an ascertained number of a suspension of bacteria which have been heated just sufficiently to kill them and which are preserved by a chemical germicide The vaccines are "corresponding," that is, they consist of a germ similar in species to the one exciting the disease, as *Staphylococcus pyogenes aureus* for furuncle, or, better still, they are autogenous, that is, prepared from the patient's own lesion, hence it will be seen that the practice is really a kind of artificial autoinoculation by which the microbe causing the disease is reintroduced by laboratory art Compared with all similar essays in the direction of artificial bacterial inoculation two features of Wright's methods are prominent—the comparatively small dose and the long interval between inoculations This may be illustrated in the case of tuberculous affections where the standard vaccine is Koch's new tuberculin (T R.) consisting of the suspended, triturated bodies of the tubercle bacilli, the average dose 1/1000 mg, and the ordinary interval between treatments 7 days Compare this with the gigantic dose of previous tuberculin inoculations and their daily or twice daily repetition and you will see the radical and seemingly very fundamental nature of Wright's departure

Now by following the events subsequent to the introduction of a bacterial vaccine by opsonic evaluations, Wright and his associates show that at first a fall of opsonic index, or so-called "negative phase," ensues, to be followed by a rise, the "positive phase," generally lasting 5 to 7 days, then comes another gradual recession in the opsonic index Symptomatically these fluctuations are also demonstrable in the constitutional depression and the aggravation of the local lesion during the negative phase, and the improved general tone and healing in the local lesion of the positive phase An imperative rule in opsonic therapy is to not reinoculate during the negative phase and the time of election for a new treatment is just after the positive phase begins to fall The harm of tuberculin injections of previous practice is explained by Wright as the production of a marked negative phase by too large a dose, and its continuous aggravation by too rapid a repetition One can verify this and often to his sorrow, in other infectious conditions by giving too large a dose of the bacterial vaccine or by pushing a small dose too rapidly

With this much by way of imperfect introduction to the principles and technic of opsonic therapy, I shall endeavor to elucidate further points by illustrations in actual cases treated by me or by those with whom I am associated in private or hospital practice

PERSONAL CLINICAL EXPERIENCE

A recital of the practical therapeutic results which have followed in various cases that I have personally treated by bacterial inoculation must necessarily take the nature of a summary as the detailed description of any one of the more interesting cases would make a report of considerable length Before discussing the groups into which for convenience, I have assigned the cases, I wish to say that, while the taking of the opsonic index has not been neglected, it has not been carried out in any case with the regularity that would obtain were my situation more favorable and assistance in this tedious work available As a matter of fact I have had to rely quite largely on the clinical manifestations as a guide to the repetition and size of dose With the control afforded by the more systematic opsonic determinations by which a falling of resistance is often shown before symptoms indicate it, I believe the good effects of this treatment could be increased

STAPHYLOCOCCUS INFECTIONS

Acne and Furunculosis—In the first group I shall include the diseases caused by pyogenic staphylococci and mention primarily acne In my own practice I have treated two aggravated cases of acne vulgaris of one and two years' duration, respectively, in young men In each the staphylo-opsonic index was low at the outset of treatment and was progressively raised by the injection at intervals of 7 to 10 days of staphylococcus vaccine, in one case being the *Staphylococcus pyogenes albus* from the patient's own lesion, to be followed later by a mixture of the *albus* and *citreus*, and in the other the mixture of *albus* and *citreus* also from the individual's own pustules In the first patient eight injections have been given and a steady improvement amounting to almost complete cessation of the acne has resulted All the old brawny, sluggish, indurated nodules have ceased to appear, the seborrhea has given way to a smooth, soft, pliable, non-oily skin, and with these local changes the patient's tone has improved, an excellent appetite has replaced a capricious one, and a gain of five pounds in weight in six weeks has followed, all of this with no other local or general measures In the second case six treatments have changed a most repulsive case of indurated acne of the face into one with sparing superficial pimples, with a disappearance of black-heads and grease to be replaced with a soft, clear skin, giving the whole face a new and clean complexion This patient now seems to have reached Wright's "high tide of immunity," for improvement has been steady since the last injection, three weeks ago, and the previously fluctuating opsonic index now has a high and sustained point. Several patients with acne, including one with an obstinate acne rosacea, have been treated with vaccines of my preparation, and under my direction, by a prominent local dermatologist, with complete recovery or very marked improvement in all It was this specialist who first called my attention to the simultaneous improvement in the seborrhea during the progress of the acute treatment a most surprising feature of which is the spontaneous bodily extension of the comedones after an inoculation

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use the vaccine which had been prepared from the *Staphylococcus pyogenes aureus* isolated from one of the early furuncles, one large boil was present on the side of the head, two on the abdomen in sites not previously the seat of mosquito bites, and one very large so-called "blind boil" on the pudendum All these were incised and the first and only dose of vaccine injected The incised boils suppurated freely the next day and the child was quite indisposed, but on the second day the suppuration ceased On this day, too, a bright lively revival of spirits and improved appetite appeared and continued, and from that day, last midsummer, to the present the child has had no sign of a furuncle

Another case of chronic generalized furunculosis of two years' duration has been brought under control by three weekly doses of *Staphylococcus pyogenes aureus* vaccine, the first from a stock vaccine and the two later of autogenous origin The disappearance of the last boil has now occurred and I predict that one or two more injections will effectually and finally rid this man of his trying affliction Similarly a case of recurring furunculosis in a physician has been brought to a standstill by two artificial autoinoculations of the *Staphylococcus pyogenes aureus*

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followed my use of tuberculin injection after Wright's dosage, one of advanced pulmonary tuberculosis and extensive intestinal ulceration where, after a gain in appetite and improvement in the febrile curve following the first injection, the patient progressively declined to the end, with no gain from the following two injections. Another case diagnosed as probable abdominal tuberculosis, but more likely an example of a malignant abdominal neoplasm, was, because of the low tuberculo-opsonic index, tentatively treated with a combination of tuberculin and colon bacillus vaccine. A short and very surprising gain in general and local conditions gave way and death followed in a month.

Urinary Tuberculosis.—A case of urinary tuberculosis in which the pneumococci and tubercle bacilli are present in the pus has been treated with mixed tuberculin and pneumococcus vaccine for some two months, with progressive betterment, a gain in weight and lessened pyuria.

GONORRHEAL AFFECTIONS

With one class of diseases I believe, from all I can learn, that my experience has been unique, that is, with the affections caused by the gonococcus. If my information is correct Wright has steadily predicted that gonorrheal infection would yield to opsonic therapy, but because of the difficulty in making a suitable vaccine he had not, at least to last midsummer, advanced in this line of work. Perhaps, with some element of chance, it has been my fortune to obtain a strain of gonococcus from which a standard or stock vaccine was prepared which has given some very encouraging results in the treatment of certain forms of gonorrheal infection. I say particular strain because several other strains rendered available to me on account of my special work on the gonococcus, including in two cases the autogenous ones, that is, those from the patients' own secretions, have failed to give the satisfactory results obtained by the one I am using.

Balanoposthitis.—My first test was made early last summer in a case of balanoposthitis and gonorrheal urethritis of eight months' duration, with the usual picture of an immensely swollen and phimosed foreskin and a thick scar-like preputial orifice. On the second day following an injection of the gonococcus preparation the swelling began rapidly to subside and by afternoon the patient reported with the foreskin retreated, the glans clean and free from redness or pus, and the urethral discharge much diminished. He stated that this was the first glimpse of the glans penis that he had had for eight months. Four succeeding injections brought a check to the urethritis and at last account the patient was well.

Double Epididymitis and Perineal Fistula.—Another example of the rapid, specific action of the gonococcus vaccine on the inflammatory complications of gonorrhea was a case of urethritis of six weeks' duration, complicated with a proctitis of three weeks' standing, a double epididymitis for eight days and a forming perirurethral abscess. A more miserable individual than the young man with these lesions and a two hours' torture after each urination, a severe backache and general depression would be hard to find. Within twenty-four hours from the first injection of the gonococcus preparation all pain on urination and all backache had left, the swelling in the epididymal tissues had subsided so rapidly as to cause a "crawling sensation" from the retracting dartos, the perirurethral abscess had broken, leaving a perineal urinary *fistula*. Following these events the patient's appetite returned and became insistent and he began a gain in flesh that has to the present time increased his weight beyond anything heretofore normal, amounting to 9 pounds since the inoculations were begun. Four subsequent injections at weekly intervals have been given, and no other treatment, the proctitis disappeared during the first week, absolutely no induration remains in either epididymis, the perineal induration has disappeared, the urinary fistula has closed, and the urethral discharge has almost completely subsided.

Subacute Epididymitis.—Within the week I have treated by the same method a left-sided gonorrheal epididymitis of a month's duration, as large as a hen's egg, much indurated and exceedingly tender. In twenty-four hours after inoculation the mass had begun to reduce in size, was softer and much less tender. In forty-eight hours all the swelling of the epididymis had subsided except an induration limited to the caput, and by the third day this had departed and the patient's general condition was so excellent that he was discharged from the hospital and will report personally for further inoculation.

As to the significance of these results which I believe are but typical of what can be accomplished in subacute and chronic gonorrheal inflammations by the use of an effective gonococcus vaccine, comment is unnecessary among physicians who have handled these complications by any previous method, including even the use of passive hyperemia or puncture in the treatment of gonorrheal epididymitis.

Gonorrheal Rheumatism.—That a further field of great usefulness is in store for opsonic therapy in gonorrhea is my belief from my experience in treating two cases of gonorrheal polyarthritis, or so-called gonorrheal rheumatism. In one of these patients the infection had existed four months and involved several joints. Progressive betterment of the arthritis with departure of the swelling, pain and immobility was effected by four injections when the patient considered himself cured and has no longer reported. In another instance the man was almost a helpless cripple with a gonorrheal arthritis of four years' duration involving both wrists, both shoulders, one elbow and one knee, all the affected joints being immovable or of very restricted mobility. The usual symptoms of pain, sleeplessness, cold sensation, cold sweats and physical and mental depression were in evidence. Five injections at weekly intervals have worked a most surprising improvement in this man's condition. Practically all swelling and thickening of the joints have subsided, and all are now freely movable, the range being normal except for the left wrist. Along with the gratifying local improvement there has been a practical cessation of joint pain, good restful sleep undisturbed by chilly sensations or sweats, a progressive improvement in appetite and a steady gain in weight, and with all this a revival of spirits and a physical activity very pleasant to witness.

Gleet.—In one case of long-standing gleet the discharge ceased apparently permanently after three injections, in another after four weekly doses the diffusely purulent urine has cleared, the threads have almost vanished, and in both these patients a greatly improved general tone with increased appetite and weight has followed the treatment. In my only case of subacute uncomplicated urethritis I have not succeeded in entirely checking the discharge, though this patient, too, has gained in flesh to exceed his usual weight in health.

Ophthalmia, Conjunctivitis, and Vaginitis.—In two cases of gonorrheal ophthalmia, two inoculations in each instance sufficed, with the coincident local treatment, to effect a perfect recovery, which was hastened in a manner very surprising to those who witnessed it. So also an example of gonorrheal conjunctivitis of several months' duration has responded with complete disappearance of all conjunctival injection during the positive phase, to reappear as soon as this stage subsides, making the case one of the most striking symptomatic demonstrations of opsonic fluctuation that I have seen. Gonorrheal vaginitis in two little girls yielded to two inoculations each which reinforced the irrigation treatment.

In emphasizing my unusual experience in handling gonorrheal diseases I would lay particular stress on the fact that no other therapeutic measure was used in any of my personally treated cases except the stretching of a stricture in the worst example of gonorrrheal arthritis. Because of my inconvenient situation it has not been possible to bring to the aid of the inoculation such other procedures as irrigation, sounding or what not, commonly practiced in the treatment of gonorrhea, and, of course, for the best results, particularly for handling the urethral discharge, such measures probably should be used in conjunction with the gonococcus vaccine. Nor have I been able to make a sufficient number of opsonic indices to furnish this additional guide in opsonic therapy. Still it is clear that therapeutic effects have been obtained entirely beyond anything heretofore possible, and these by the use of small, non-painful, simple subcutaneous injections at weekly intervals.

CONCLUSION

In dismissing this account of my personal experience with Wright's method of treatment I will say that if the therapeutic results which have been presented were based solely on my own work I would not have the courage to make them public at this time, when but six months have elapsed since my first clinical experiments began. But because they duplicate the published reports made by Wright and his followers in England in connection with the various groups of infections except the gonorrheal, and since they correspond with the reports brought to the United States by those who have visited Wright's laboratory, I am somewhat less diffident.

Moreover, I believe the adoption of opsonic therapy in this country depends on the promulgation among practicing physicians of the actual clinical achievements, and this as speedily as accurate observation shall warrant, and it is my conviction that a method of practice with such vast humanitarian possibilities should be brought into the possession of the medical profession without delay.

Finally, from what I have already seen, which is tempered by a rather extensive experience in private and institutional medical work, I am prepared to assert that with the proper artificial autoinoculation we can obtain constitutional and local improvement in many subacute and chronic infections entirely beyond anything previously possible in medicine. And I am personally assured that in these bacterial inoculations we possess therapeutic agents of a specificity and potency exceeding anything heretofore employed in the treatment of disease except possibly the antitoxin of diphtheria.

[FOR THE DISCUSSION SEE PAGE 639.]

ACCURATE MODIFICATION OF MILK, SIMPLE AND PRACTICABLE *

DANIEL R. BROWN, M.D.
SALEM, MASS.

Accurate modification of milk involves the calculation of definite percentages of fat, mixed proteids, caseinogen, etc., for mixtures of cream and milk and of cream and milk and whey. The necessary operations are expressed most conveniently in algebraic equations.

Of the merits of percentage modification, the American method of preparing cow's milk for the infant, it is sufficient to say that it provides the instrument of precision, for this reason alone, if there were none others, it is desirable that it should be established on the mathematical principles which it involves and on which it depends. If formulas are employed to determine the required quantities of materials, they should accord with these principles and with the chemical facts, they should be accurate, also, and adequate. None of the published formulas meets these requirements, and generally accepted statements on the subject of the calculation and the preparation of percentage mixtures are, in certain important respects—practically important—misleading. As the formulas to be presented conflict with, or disregarded some of them, their integrity can not be established without reference thereto, moreover, in the absence of error or misconception, there would be no reason—no excuse—for further contribution to this part of the subject.

It is generally understood, for example, that a variety of creams, creams of different strengths, is essential to accurate and adequate modification of milk. What are known, respectively, as 8 per cent., 10 per cent., 12 per cent., 16 per cent. and 20 per cent. cream are commonly employed, directions are given, accordingly, for obtaining these creams by gravity, together with tables that show their proteid and sugar percentages, which are different for each variety of cream, and are differently given by different authors, other tables that show the limitations in the percentages of fat and of proteids that are obtainable by the use of creams of different strengths, others that show the percentages of the food-elements that are reciprocally obtainable, and still others by which the choice of the creams to be employed for particular modifications is directed. Under these conditions, confronted at the outset by these tables, the apparent necessity for the use of a variety of creams ranging from 8 per cent. to 32 per cent., of which each must be computed by a slightly different equation, it is not surprising that one unfamiliar with the percentage method and mathematical formulas, should find accurate modification impracticable in advance.

But while all these factors may be employed very few of them are essential, either to the statement of the problem, or to its solution. A variety of creams is not only unnecessary, but undesirable, because of the confusion to which it gives rise, and of all the facts recorded in these tables, as factors, knowledge of two only is required, for practical purposes (1) the analysis (the fat, proteid and sugar percentages) of cow's milk, (2) how to obtain adequate cream, a single variety of adequate cream, by gravity.

Of the published formulas, the series proposed by Dr. Westcott[1] in his admirable monograph are the ones

* Read in the Section on Diseases of Children of the American Medical Association at the Fifty-...

1 Scientific Milk Modification, In...

for which accuracy and completeness are claimed But in the derivation of these formulas the principle on which the calculation depends is not recognized, or is not regarded, and the assumptions on which the working equations are based are untenable The formulas are inadequate also Westcott's equations for combining cream and whole milk depend on equality of the fat and proteid percentages of the milk, but, according to recent analyses, the mixed milk from a herd of cows contains 3 50 per cent. proteids and 4 per cent fat, these equations fail accordingly for standard milk, and, of course, for all milk of which the fat and proteid percentages are not precisely equal In the equations for cream and fat-free milk it is assumed that the proteid percentages of whole and fat-free milk are equal, which, since cream has a lower proteid percentage than milk, is mathematically impossible His formulas for computing whey-cream mixtures are based on the proposition that the proteid percentage (?) of a mixture of cream and whey is equal to the proteid percentage of the cream plus proteid percentage of whey employed, but the former refers to mixed proteids, the latter refers to whey proteids alone While together they make up the percentage of proteids in a mixture, they can not be added together to make a "proteid percentage" No provision is made for the computation of definite percentages both of fat and of (mixed) proteids, except for the small percentage of fat that may be contributed by the whey, the percentages of each that may be obtained depend on the strength of the cream employed, which is computed for a definite percentage of fat, or for a definite percentage of proteids (?) The number of modifications obtainable is limited, therefore, according to these formulas, by the number of creams available, and the equations are inadequate

The formulas for combining cream and whole milk first proposed by Dr Westcott "depended on the calculation of the amount of combined cream and milk required to give the desired proteid percentage of the mixture," the factor assumed to represent the "average proteid percentage of mixed cream and milk" depending on the strength (fat percentage) of the cream employed These equations also are at fault, as will be shown in the succeeding analysis, the proteid percentage of the mixed, or mixture of, cream and milk required to yield a particular modification does not depend at all on the fat percentage of the cream, but is the same always, whatever the strength of the cream employed may be

In the following analyses, and in the equations derived therefrom, it is assumed that whole milk contains 3 50 per cent of proteids, 4 per cent of fat, and 4 50 per cent of sugar, unless otherwise specified As far as common factors are employed, the usual symbols and equivalents have been adopted, with certain additions

Q = quantity of food desired
F = desired percentage of fat.
P = desired percentage of proteids
S = desired percentage of sugar
a = the fat percentage of cream
b = the proteid percentage of cream.
c = the sugar percentage of cream and of milk.
a' and b denote, respectively, the fat and the proteid percentage of the milk employed
X = *appropriate cream*
B = the proteid percentage of *appropriate cream*
R = the ratio $\frac{F}{P}$

The formulas herein presented are based on four especial considerations or propositions

1 Since cream has a lower proteid percentage than milk, fat-free milk must have a higher proteid percentage than milk, which is essentially 4 per cent cream, and on chemical analysis it appears, accordingly, that whole (4 per cent) milk having a proteid percentage of 3 50 the fat-free milk has proteid percentage of 3 60 The loss of 4 per cent. fat, therefore, involves the gain of one-tenth of 1 per cent of proteids, and, of course conversely, whence the principle may be deduced that for each 4 per cent gained in fat-value, cream loses one-tenth of 1 per cent. in proteid-value, or, for each gain of 1 per cent in fat, loses 025 per cent in proteid-value (and in sugar-value[2])

2 The ratio of the fat percentage to the proteid percentage of a particular cream is the ratio of fat percentage to proteid percentage that is obtained by diluting the cream with water, thus, the fat percentage of 16 per cent cream is 16, the proteid percentage is 3 20, the ratio, 16 to 3 20 is 5 to 1, if 16 per cent cream is mixed (diluted) with an equal part of water, the mixture will contain 8 per cent fat, 1 60 per cent proteids, the ratio, 8 to 1 60 is 5 to 1

3 A cream of which the ratio of fat percentage to the proteid percentage (a to b) is precisely the ratio of the desired fat percentage to the desired proteid percentage (F to P) is what may be termed the *appropriate cream* in each case, since by itself, without the addition of milk, it is capable of furnishing both the required quantity of fat and the required quantity of proteids The ratio, F to P, therefore, indicates the *appropriate cream* in each case thus, for a 20 oz mixture to contain 4 per cent F and 80 per cent P, 16 per cent cream is appropriate, because the ratio, 16 to 3 20 is the same as 80 the ratio of 4 to 80 and 5 oz of 16 per cent cream will supply both the 8 oz of fat and the 16 oz of proteids desired Thus

5 × 16 per cent = 80 oz. fat.
5 × 3 20 per cent = 16 oz. proteids

The ratio 4 to 8 or 5 to 1 indicates 16 per cent. cream

4 Theoretically, there is an infinite number of creams and an infinite number of ratios of fat to proteids, theoretically, therefore, there is *appropriate cream* for every ratio F to P that is attainable, but practically it is impossible to obtain directly, either by the centrifuge or by gravity, *appropriate cream* for all these ratios, it is necessary, therefore, to mix cream of known percentages with milk of known percentages, but in each case the mixture of cream and milk that is capable of furnishing the required percentages represents, is, essentially, *appropriate cream* and has the same fat, the same proteid and the same sugar percentages

For example

	Fat percentage.	Proteid percentage.
1 oz cream	16	3.20
1 oz of milk	4	3 50

Together are equal to 2 ounces of 10 per cent cream

$\frac{16 + 4}{2} = 10$ per cent. F

$\frac{3\,20 + 3\,50}{2} = 3.35$ per cent. P per cent cream)

2. The sugar percentages of cream and milk obey the same laws that govern the proteid percentages

In the application of these principles, two sets of formulas have been derived General formulas of universal application and working formulas which provide specifically for the use of materials that are generally available for purposes of home modification

SERIES I GENERAL FORMULAS MIXTURES OF CREAM AND MILK.

Modified milk is always diluted milk, rather, diluted cream, and, as we have seen, the ratio F to P indicates the cream to be employed—the *appropriate cream* in each case

In the computation of percentage mixtures it is necessary to determine in the first place the quantity of *appropriate cream* that is required to obtain the desired mixture, either the fat percentage, or the proteid percentage may be taken as the basis for this calculation The latter has been preferred, because the proteid percentages of the creams ordinarily indicated do not differ very much. Obviously, the proteids in the *appropriate cream* (B × X, or B X) must equal the whole quantity of proteids desired (Q × P, or Q P), that is, Q P = B X, and the quantity X required must depend on its proteid percentage, B When cream is *appropriate*, the ratio a to b equals the ratio F to P, that is,

$\frac{a}{b}=\frac{F}{P}=R$ whence $a = b\ R$ In creams of which the ratio $\frac{a}{b}$ is below 7 50 (creams below 23 per cent about), the proteid percentage decreases with the increase in the fat percentage in such proportion that three times the ratio $\frac{a}{b}$, plus 1 is in some cases precisely and in all other cases almost precisely equal to b times the ratio, that is, $\frac{3a}{b}+1=\frac{ba}{b}$ and, since cream loses 025 per cent of proteids for each 1 per cent gained in fat, 025 $\left[\frac{3a}{b}+1\right]$ equals the proteid percentage lost in each case, which, deducted from the proteid percentage of fat-free milk, would equal the proteid percentage of the cream, but the proteid percentage of fat-free milk represents the loss of 4 per cent. of fat, wherefore, taking the proteid percentage of whole milk as the basis for the calculation, 025 $\left(\frac{3a}{b}+1-4\right)$ deducted from the latter equals the proteid percentage of the cream in each case, that is, $3\ 50 - 025\ \left[\frac{3a}{b}+1-4\right]$, or, $3\ 50 - 025\left[\frac{3a}{b}-3\right]=b$, whence, since $\frac{a}{b}=R$ when cream is *appropriate* (B) $3\ 50 - 025\ (3R-3)=B$ [8]

The proteid percentage of each variety of cream may be determined in the same way, that is, since cream loses 025 per cent of proteids for each 1 per cent gained in fat, and, since the proteid percentage of whole milk represents the gain of 4 per cent of fat $3\ 50 - 025\ (a-4)=b$

But in order to obtain *appropriate cream*, it is usually necessary to combine cream of known percentage with milk of known percentages, X, therefore, must be equal to the quantity of cream and milk required, that is, $X = C + M$, whence $X - C = M$ Any variety of cream that is adequate and any adequate milk may be employed, but in all cases, the cream and milk together must supply both the required quantity of fat and the required quantity of proteids, that is,

(1) $a\ C + a'\ M = Q\ F$, and

(2) $b\ C + b'\ M = Q\ P$, by substituting for M its equivalent X — C, and transposing, equation (1) becomes

$Q\ F = a\ C + a\ (X - C)$, or

$Q\ F = a\ C + a\ X - a\ C =$

$Q\ F - a\ X = (a - a')\ C$, whence

$$\frac{QF-a'X}{a-a'}\ C\ \text{(cream)}$$

By transposition equation 2 becomes $Q\ P = b\ C + b'\ M =$

$$\frac{QP-bC}{b'}=M$$

Five per cent of lime water is required to make the mixture alkalin in reaction

$$\frac{Q\times 5}{100}=\text{Lime water}$$

Since the sugar percentages obey the same laws that govern the proteid percentages, they may be computed in the same way—taking the sugar percentage of whole milk as the basis for the calculation, accordingly, (E) $4\ 50 - 025\ (3\ R - 3) = C$ In the case of cream and milk of the standard analysis, the sugar percentage equals the proteid percentage plus 1, that is, $B + 1 = C$ *

It may be desirable to know the strength of cream that is necessary in order to obtain a particular modification (percentages) *Appropriate cream* is always the weakest adequate cream, that is, the weakest cream that may be employed in combination with milk to obtain the desired percentages in each case As we have seen, $\frac{3a}{b}+1=b\ R=a$, when cream is appropriate $\frac{a}{b}=R$, wherefore, (A) $3\ R + 1 = a$ (adequate cream) [4]

The *limitations* in the percentages of fat and of proteids obtainable by the use of a particular variety of cream are shown by the ratio a to b in each case, thus, when cream is diluted with water, the ratio a to b determines the ratio F to P, that is,

$\frac{F}{P}=\frac{a}{b}=R$ whence $R\ P = F$ and $\frac{F}{R}=P$ any ratio $\frac{F}{P}$ below the ratio $\frac{a}{b}$ may be obtained by combining the cream with milk.

If the milk in use is of other than the standard analysis, the coefficient of proteid loss, and the ratio $\frac{a}{b}$ must be determined, and the working equations modified accordingly The proteid and sugar percentages of cream in each case depend, of course, on the analysis

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8. When R (the ratio F to P) exceeds 7 50, the equation must be modified

$3\ 50 - 025\ (3\ R - 4) = B$ when R is between 7 50 and 9

$3\ 50 - 025\ (2\ R \times 5) = B$, when R exceeds 9

Practically a ratio F to P as high as 7.50 is never indicated in mixtures of cream and milk equation B therefore, meets every requirement in practice, and is employed accordingly in the general formulas, subject to the exceptions noted. The same remarks apply to the equation for finding the sugar percentage of *appropriate cream* For certain ratios the percentage B thus determined is absolutely accurate and in any case the error is very small, seldom more than a few thousandths of 1 per cent.

The fat and proteid percentages of *appropriate cream* (A and B) for all attainable ratios may be arrived at with absolute accuracy by the following calculations B having been determined approximately

$$\begin{array}{l} B\ R = a \\ (C)\ \ 3\ 50 - 025\ (a - 4) = b \\ \qquad b\ R = A \\ \qquad 3\ 50 - 025\ (A - 4) = B \end{array}$$

These operations are repeated until the desired ratio is established that is, until $\frac{A}{B}=R$. Many ratios are practically unattainable on account of the decimals involved The general equations (in which p = the coefficient of proteid loss) are $B\ R = a$ $b - p\ (a - a) = b$ etc.

* When R exceeds 7 50 the equation is modified

4 When R exceeds 8 2 $R + 9 = a$

of the milk from which it is derived, but, in some of the published tables of analyses, these percentages are given apparently without reference to the analysis of the milk in use, for example, 12 per cent cream from 4 per cent milk (4 per cent P) may be grouped with 16 per cent cream from 3 50 per cent. milk The tables of different authors do not agree, therefore, and for purposes of computation are unreliable for the most part. If the milk in use is deficient in fat, the strength of gravity cream therefrom is reduced in each case In these cases, the coefficient of proteid loss is increased

The fat and proteid percentages of the milk and the proteid percentages of a single variety of cream being known, other values (as factors) may be computed The general equations are

$$\frac{b' - b}{a - a} = P$$

$$(C)\quad b - p\,(a - a) = b$$

$$(D)\quad \frac{b' + a\,p - b}{P} = a$$

The accuracy of the working formulas to be derived for the use of milk and cream of other than the standard analysis depends on the accuracy of the percentage B, for the ratios commonly required, this factor may be determined, approximately, by the formula

$b' - p\,(3\,R - 2) = B$, or

$b' - p\,(3\,R - 3) = B$

(depending on the value of p), and accurately for all ratios by the calculations that have been indicated [3] For practical purposes an "average" percentage may be used

Equations that provide for the use of whole milk containing 4 per cent of proteids, and of milk deficient in fat are included in the series of working formulas (Series IV, B)

Mixtures in Which P Equals, or Exceeds F—Appropriate cream for these modifications is, of course, separated milk, since there is no cream of which the proteid percentage equals, or exceeds the fat percentage. Any separated milk in which the ratio of fat to proteids is not above the ratio $\frac{F}{P}$ is adequate, and cream of any strength, even 4 per cent. milk, may be combined with it

The use of fat-free milk simplifies the computation of these mixtures, which, in this case, may be made by the special formulas for cream and fat-free milk If separated milk is employed, its fat percentage should be computed (preferably), and the required quantities of cream and milk determined by the general formulas (Series 1) In these cases it is unnecessary to compute the percentage B, which, for standard milk, must always be between 3 50 and 3 60, the mean percentage 3 55 may be assumed accordingly

SERIES II SPECIAL FORMULAS CREAM AND FAT-FREE MILK

These equations depend on the same principles and are derived in the same way as the equations in the general formulas, but in this case it is unnecessary to find the quantity X, or the percentage B, since all the fat is supplied by cream, which is computed directly Thus

1 $\frac{Q\,F}{a} = C$ Cream

$Q\,P = b\,c + b\,M$ whence

2 $\frac{Q\,P - b\,c}{b'} = M$ (Milk)

3 $\frac{Q\,S - c(C + M)}{100} = S$ (Sugar)

All mixtures to be prepared with cream and fat-free milk may be computed by these equations, if preferred

SERIES III GENERAL FORMULAS WHEY-CREAM MIXTURES

Three varieties of whey are recognized, depending on its source and the way it is prepared 1 Whey from whole milk, separated with the least possible disturbance of the curd 2 Whey from whole milk, separated after "thorough agitation" of the curd and whey 3 Whey from fat-free milk

In the text these varieties of whey are referred to, respectively, as, (1) Whole whey (which contains 32 per cent F, 86 per cent P, 4 80 per cent. S) (2) Two per cent whey (which contains 2 per cent F, 97 per cent P, 4 80 (?) per cent S) (3) Fat-free whey (which contains trace of F, 1 per cent P, 5 00 per cent S)

By the use of the whey-cream mixtures very low percentages of caseinogen with relatively high percentages of whey-proteids and of fat may be given With low percentages of caseinogen, not above 50, a maximum percentage of whey-proteids of from 75 to 90, depending on the variety of whey employed, may be obtained In the succeeding analysis, and in the equations derived therefrom, additional symbols and equivalents are employed as follows

cas = desired percentage of caseinogen
WhP = desired percentage of whey proteids
a″ b″ c″ = respectively, the fat, proteid and sugar percentages of the whey in use
F′ = fat percentage supplied by cream (and milk)
P′ = proteid percentage supplied by whey

The calculation of whey-cream mixtures requires division of the proteids into caseinogen and whey-proteids, of which the former is furnished by the cream (and milk) alone Each must be computed separately The computation in detail may be made in different ways, the simplest, on the whole, requires the conversion of the desired percentage of caseinogen (cas) into the percentage of mixed proteids which it represents, at the outset

According to chemical analysis, the percentage of whey-proteids in cream and milk is equal to one-fifth of the percentage of caseinogen (about), a given percentage of caseinogen (cas), therefore, represents a percentage of mixed proteids one-fifth greater, that is cas $+ \frac{cas}{5} = P$ This simple calculation having been made, the equations for finding the required quantities of cream and milk are substantially the same as the corresponding equations in the general formulas (Series 1), and are derived in the same way

The ratio F′ to P indicates *appropriate cream* in each case, and the percentage F′ depends, of course, on the kind of whey employed The fat percentage of whole whey is equal to 37 per cent. of its proteid percentage (32/86) The fat percentage of 2 per cent whey is equal to twice its proteid percentage (about) 2x 97, accordingly,

F — 37 P = F when whole whey is used.
F — 2 P′ = F′ when 2 per cent. whey is used
F = F′ when fat free whey is used.

The percentage of proteids furnished by the whey (P′) must be equal to the desired percentage of whey-proteids less that contributed by the cream (and milk), that is, $WhP - \frac{cas}{5} = P'$

The necessary operations are expressed in equations as follows

$$1 \quad Whp - \frac{cas}{5} = P'$$

$$2 \quad \frac{QP}{80} = \text{whole whey} \qquad \frac{QP'}{1} = \text{fat-free whey or 2 per cent whey}$$

The required quantity of whey having been computed, it is simpler to determine the percentage F′ by the following equation, which expresses the fact that the required quantity of fat is equal to the fat in the cream and milk plus the fat in the whey employed, that is,

$$QF = QF' + a'' \text{ whey whence } \frac{QF - a \text{ whey}}{Q} = F'$$

$$\text{the ratio } \frac{F'}{P} \text{ indicates } \textit{appropriate cream } \frac{F}{P} = R$$

The equations for cream and milk, respectively, are the same as the corresponding equations in the general formulas (Series 1), except that the former provides for the use of whey containing fat

$$QF = a\,C + a\,M + a'' \text{ whey, whence, since } X - C = M$$

$$\frac{QF - (a\,X + a'' \text{ whey})}{a - a} = \text{Cream}$$

$$\frac{QS - (c\,X + c'' \text{ whey})}{100} = \text{Sugar}$$

RECAPITULATION

SERIES I—MIXTURES OF CREAM AND MILK GENERAL FORMULAS

$$1 \quad \frac{F}{P} = R$$

$$2 \quad 350 - 025\,(3\,R - 3) = B$$

$$3 \quad \frac{QP}{B} = X$$

$$4 \quad \frac{QF - 4}{a - 4} = \text{Cream}^5$$

$$5 \quad \text{(a) } X - C = M \quad \text{(b) } \frac{QP - bC}{3\,50} = M^6$$

$$6 \quad \frac{Q \times 5}{100} = \text{Lime water}$$

$$7 \quad \frac{QS - cX}{100} = \text{Sugar}$$

SERIES II—CREAM AND FAT-FREE MILK SPECIAL FORMULAS

$$1 \quad \frac{QF}{a} = \text{Cream}$$

$$2 \quad \frac{QF - bC}{b'} = \text{Milk}$$

$$3 \quad \frac{QS - (cC + aM)}{100} = \text{Sugar}$$

SERIES III—WHEY-CREAM MIXTURES GENERAL FORMULAS

$$1 \quad cas + \frac{cas}{5} = P$$

$$2 \quad \frac{Q\left(WhP - \frac{cas}{5}\right)}{b''} = \text{Whey}$$

$$3 \quad \frac{QF - a''\text{Whey}}{Q} = F'$$

$$4 \quad \frac{F'}{P} = R$$

$$5 \quad 3\,50 - 025\,(3\,R - 3) = B$$

$$6 \quad \frac{QP}{B} = X$$

$$7 \quad \frac{QF - (a'X + a''\text{Whey})}{a - a'} = \text{Cream}$$

$$8 \quad \frac{QP - bC}{b'} = \text{Milk}$$

$$9 \quad \frac{QS - (cX + c''\text{Whey})}{100} = \text{Sugar}$$

SERIES IV—WORKING FORMULAS

In practice, the use of the general formulas is very seldom necessary, every mixture of cream and milk, and, with very few if any exceptions, every whey-cream mixture that is indicated may be computed with substantial accuracy by the working formulas

For the mixtures commonly required, the maximum error in the results obtained by these equations is five one-hundredths of 1 per cent of fat, or of proteids (according to the equation employed for finding the required milk) and for the greater number of modifications required it is between one and two hundredth of 1 per cent

Any varieties of cream and of milk that are adequate may be employed. Of the creams generally in use and readily obtainable by gravity, both 16 per cent. and 20 per cent cream are adequate every mixture of cream and milk, with a few possible exceptions, and there are very few, if any, every "whey-cream" mixture that is indicated, may be obtained by combining 16 per cent or 20 per cent cream[7] with milk, or with whey, or with milk and whey Both of these varieties of cream are well adapted for purposes of home modification The former has the special advantage that it is always readily available in sufficient quantity[8] On the whole, it is probably the best selection that can be made The use of whole milk simplifies the preparation of the food, and it is more constant in composition (percentages) than that separated, or fat-free milk obtained by gravity The working formulas provide accordingly for the use of 16 per cent cream and whole milk

Whatever variety of cream is employed, the full quantity obtainable by gravity from a given quantity of milk should be removed (preferably the separated milk should be discharged by a siphon) and well mixed before any part of it is used in the preparation of the food,

5 If other than 4 per cent (F) milk is in use substitute its fat percentage for the factors 4 and its proteid percentage for the factor 3 50

6 When the percentage B is computed accurately the equations (a) and (b) in No 5 for finding the required quantity of milk are precisely equal

7 A mixture of the top 6 oz of a quart of 4 per cent. milk set 8 hours or longer represents 16 per cent cream of which the top 4 oz (mixed) is 20 per cent cream Four (4) ounces of 20 per cent. cream may be obtained from a quart of 4 per cent. milk set 4 hours (Rotch)

8 Six ounces of 16 per cent cream in combination with whole (4 per cent.) milk will furnish sufficient fat for the daily ration of the infant at all ages, presuming that the usual or average mixtures are employed This statement is based on the feeding-chart issued by the Walker-Gordon Milk Laboratory

as the surface cream is always very much richer than other portions of it

The working equations are based on the consideration that *appropriate cream* for the mixtures (ratios) usually to be employed is between 5 + per cent and 10 per cent cream, of which the proteid percentage is between 3 46 + per cent and 3 35 per cent., the mean percentage, 3 40 is taken accordingly to represent the "average" percentage B for these ratios, and the general equation $\frac{QP}{B} = X$ becomes $\frac{QP}{3\,40} = X$ Sixteen per cent cream has a proteid percentage of 3 20

3 50 per cent — 025 (16 4) = 3 20 per cent (b)

The fat in the cream (16 C) plus the fat in the milk (4 M) must equal the required quantity of fat (Q F), and the proteids in the cream (3 20 C) plus the proteids in the milk (3 50 M) must equal the required quantity of proteids, that is,

(1) Q F = 16 C + 4 M, and
(2) Q P = 3 20 C + 3 50 M

Substituting the value X — C for M in equation (1), it becomes Q F = 16 C + 4 X — 4 C, whence

$$\frac{QF-4X}{16-4} = \text{Cream}$$

(a) X — C = Milk, and, since Q P = 3.20 b + 3 50 M,

$$(b)\ \frac{QP-3\,20C}{3\,50} = \text{Milk}$$

When the percentage B is accurately determined, equations (a) and (b) for finding the required quantity of milk are precisely equal The error involved in the use of an "average" factor B affects either the fat percentage alone, or the proteid percentage alone, according to the equation employed for milk, equation (a) (X — C) determines the fat percentage of the mixture accurately, by the use of equation (b) the proteid percentage is correctly obtained Generally the latter is the more important, but for the mixtures commonly required the error is so small that the simpler equation X — C yields satisfactory results

The sugar percentage of cream and milk is equal to the proteid percentage plus 1, accordingly C = 3 40 + 1 or 4 40 per cent, and $\frac{QS-4\,40(C+M)}{100} = \text{Sugar}$, The quantity of sugar to be added is usually very nearly equal to 5 per cent of the quantity of food to be prepared The fat percentage of mixtures of 16 per cent cream and whole milk may be decreased, or increased, without materially affecting the proteid and sugar percentages, simply by changing the relative qualities of the cream and milk employed Of the mixtures ordinarily prescribed (quantities and percentages) each ounce of cream and milk exchanged decreases (or increases) the fat percentage from 40 to 60 per cent.

Denoting the quantity (in ounces) of cream and milk exchanged by the symbol y, the fat percentage obtained is determined by the equation $\frac{QF \pm 12y}{Q} = F$

SERIES V WORKING FORMULAS WHEY-CREAM MIXTURES

These formulas are for mixtures of 16 per cent. cream, whole milk and fat-free (or 2 per cent.) whey The ratio of fat to caseinogen in 16 per cent. cream is a little above 6 to 1, 16 per cent cream, therefore, in combination with fat-free whey is adequate for the greater number of whey-cream mixtures required The use of 2 per cent whey as a diluent increases the ratio F to cas obtainable with 16 per cent. cream from 6 to the 1 to 12 8 to 1—with low percentage of caseinogen—not exceeding 50 per cent While, of course, a larger number of modifications may be made with *appropriate cream* and fat-free whey, the number obtainable with 16 per cent cream and 2 per cent whey is large enough to warrant the statement made as to the adequacy of 16 per cent cream for the preparation of these mixtures Usually, with low percentages of caseinogen, it is desirable, and, except for the youngest infants, essential (in order to provide for nutrition) to give the highest possible percentage of whey-proteids, which is obtained, of course, by the use of whey as a diluent in place of water In these cases it is not necessary to compute the whey at all By the use of fat-free or 2 per cent whey as a diluent, from 75 per cent. to 90 per cent. of whey-proteids is obtained with low percentages of caseinogen (not exceeding 50)

Since the ratio F to cas in the whey-cream mixtures ordinarily indicated is considerably higher than the corresponding ratio $\frac{F}{P}$ in mixtures of cream and milk, richer creams are required, and the average percentage B is correspondingly lower, but to avoid confusion the factor 3 40 is retained to represent *appropriate cream* Moreover, the slightly increased error affects only the fat percentage of the mixture, which is comparatively unimportant For home modification it is probably most convenient to obtain whey from the separated milk (after the removal of the 16 per cent cream), or to use 2 per cent whey from whole milk The former may be regarded as fat-free for purposes of computation

The equations for finding the required cream and milk, respectively, are the same as the equations therefor in Series IV, except that the equation for cream, No 4 (b), provides for the use of 2 per cent whey

SERIES VI

This series is for mixtures of 16 per cent. cream and its separated milk, containing 1 23 per cent. F, 3 57 per cent P, and 4 57 per cent S

The term "separated milk" as here employed refers to the milk that remains after the removal of the full quantity of 16 per cent cream obtainable by gravity from a quart of 4 per cent. milk This milk, in combination with cream, is adequate for the preparation of all mixtures of which P exceeds, or equals, F, provided the ratio P to F is not above 2 90 (3 57 to 1 23)—practically all mixtures that are indicated, but, except for young infants and for infants with deficient digestive power, is inadequate for the mixtures ordinarily to be employed, for the reason that a sufficient quantity of fat for the daily ration can not be obtained Equations for the computation of mixtures of which P exceeds (or equals) F are included in the series of working formulas

SERIES IV (A)—WORKING FORMULAS

For the use of milk of the standard analysis—16 per cent cream and whole milk

$$1\ \frac{QP}{3\,40} = X$$

$$2\ \frac{QF-4X}{16-4} = \text{Cream}$$

$$3\ \begin{cases} \text{(a)}\ X - C \\ \text{(b)}\ \dfrac{QP - 3\,20C}{3\,50} \end{cases} = \text{Milk}^{9}$$

$$4\ \frac{QS - 4\,40(C + M)}{100} = \text{Sugar}$$

For cream and milk of the standard analysis equations (A), (B), (C), (D), (E), respectively, are

(A) $3\,R + 1 = a$ (adequate cream)

(B) $3\,50 - 025\,(3\,R - 3) = B$

(C) $3\,50 - 025\,(a - 4) = b$

(D) $\dfrac{3\,50 + 4\,(025) - b}{025} = a$

(E) $4\,50 - 025 - (3\,R - 3) = C$, or, $B + 1 = C$

SERIES IV (B)

For the use of milk and cream of other than standard analysis

For milk containing 4 00 F per cent, 4 00 P per cent, 4 50 per cent S—16 per cent cream and milk—(p = 03) [10]

$$1\ \frac{QP}{3\,85} = X$$

$$2\ \frac{QF - 4X}{16 - 4} = \text{Cream}$$

$$3\ \begin{cases} \text{(a)}\ X - C \\ \text{(b)}\ \dfrac{QP - 3\,64\,C}{4} \end{cases} = \text{Milk}$$

$$4\ \frac{QS - 4\,35\,(C + M)}{100} = \text{Sugar}$$

For cream and milk of other than the standard analysis equations (A), (B), (C), (D), (E), respectively, are

(A) $3\,R + 2 = a$ (adequate cream)

(B) $4\,00 - 03\,(3\,R - 2) = B$

(C) $4\,00 - 03\,(a - 4) = b$

(D) $\dfrac{4\,00 + 4\,(03) - b}{03} = a$

(E) $4\,50 - 03\,(3\,R - 2) = C$, or, $B + 50 = C$

SERIES V WHEY-CREAM MIXTURES

Working Formulas

For combining 16 per cent cream, whole milk, fat-free, or 2 per cent whey

$$1\ \text{cas} + \frac{\text{cas}}{5} = P$$

$$2\ \frac{Q\left(\text{WhP} - \dfrac{\text{cas}}{5}\right)}{1} = \text{Whey}$$

$$3\ [11]\ \frac{QP}{3\,40} = X$$

$$4\ \begin{cases} \text{(a)}\ \dfrac{QF - 4\,X}{16 - 4} = \text{Cream, (with fat-free whey)} \\ \text{(b)}\ \dfrac{QF - (4\,X + 2\ \text{Whey})}{16 - 4} = \text{Cream (with 2\% W)} \end{cases}$$

$$5\ \frac{QP - 3\,20\,C}{3\,50} = \text{Milk}$$

$$6\ \frac{QS - 4\,40\,(C + M) + 4\,80\ \text{whey}}{100} = \text{Sugar}$$

SERIES VI (A)

For mixtures in which P equals or exceeds F (16 per cent. cream and its separated milk containing 1 23 per cent F, 3 57 per cent P, and 4 57 per cent S)

$$1\ \frac{QP}{3\,55} = X$$

$$2\ \frac{QF - 1\,23\,X}{16 - 1\,23} = \text{Cream}$$

$$3\ \begin{cases} \text{(a)}\ X - C \\ \text{(b)}\ \dfrac{QP - 3\,20\,C}{3\,57} \end{cases} = \text{Milk}$$

$$4\ \frac{QS - 4\,57\,(C + M)}{100} = \text{Sugar}$$

SERIES VI (B)

These mixtures may be obtained also by combining whole milk (4 per cent cream) with fat-free milk The equations are

$$1\ \frac{QP}{3\,55} = X$$

$$2\ \frac{QF}{4} = \text{Cream (whole milk)}$$

$$3\ X - C = \text{Milk (fat-free)}$$

$$4\ \frac{QS - 4\,57\,X}{100} = \text{Sugar}$$

PERCENTAGE MODIFICATION IN PRACTICE.

The practical objections to this method for home modification may be grouped under three heads 1 The number of creams required and the consequent confusion both in the computation and in the preparation of percentage mixtures, since each cream must be computed by a slightly different equation, and different instructions must be given in each case for obtaining by gravity the cream to be employed 2 The difficulty of keeping in mind the percentages that are indicated for the infant at different ages 3 The number of modifications to be made, and the time and care that must be given in the case of the normal infant in order to meet the requirements according to the feeding charts

Occasionally objection is made on the ground of expense None of these objections is valid and they rest for the most part on difficulties that do not present themselves in practice As we have seen, a variety of creams is not necessary, 16 per cent cream (or any

9 By the use of equation (a) for milk, the fat percentage of the mixture is obtained accurately by the use of equation (b) for milk the proteid percentage is accurately obtained.

10 According to published analyses the coefficient of proteid loss increases with increase of the proteid percentage of the milk.

11 If the ratio $\frac{F}{P}$ exceeds 4 employ $\frac{QP}{3\,20} = X$

richer cream) is adequate for all mixtures of cream and milk, and, probably, for all whey-cream mixtures that are indicated, the directions for obtaining by gravity the cream to be employed may be the same always, therefore to be followed throughout the period of substitute feeding, and all mixtures may be computed by a single series of formulas With a little "practice," the calculation takes hardly more time and less effort than are required to compute a mixture of drugs

As to the difficulty of remembering the "percentages" that are indicated at different ages, it is not necessary to remember them Until the child is 10 or 11 months old, at any rate, the ratio of fat to proteids in the mixtures ordinarily to be employed is somewhere between 3 and 1½ to 1, that is, the fat percentage is not more than 3, nor less than 1½ times the proteid percentage (or, the proteid percentage is not less than one-third, nor more than two-thirds the fat percentage) A fat percentage above 4 is not indicated Since the ratio F to P decreases as the age increases, from 3 to 1½ to 1, one should never be at a loss as to the suitable modification for the infant at any age

The impression that frequent changes must be made in the quantities of food and in the percentages prescribed is a mistaken one [12] To be sure, the infant can not be fed properly, as Japan fought her battles in the recent war, by "previous arrangement," and the physician can not direct the feeding by this, or by any method, without some effort But, while in the case of the infant with feeble powers of digestion percentage modification gives opportunity for the exercise of great skill in adapting the food to the needs of the individual and to particular conditions, it permits, also, in the case of the healthy child, a considerable degree of routine practice For example, assuming that the physician directs the feeding from the beginning, the first prescription may call for 16 ounces, 2 per cent F, 0 70 per cent P, ten days later the percentages are advanced to 2 50 per cent F and 85 per cent P, between the third and fourth weeks, the preparation of 24 ounces, 3 to 3 25 per cent F and 1 to 1 10 per cent P, is directed, and at the end of six weeks 32 ounces, 4 per cent F and 1 50 per cent P, is ordered No further changes may be made until the child is four months old, when 40 ounces, 4 per cent F and 2 per cent. P, may be prescribed At the end of the eighth month the quantity of food and the percentages are increased to 48 ounces, 4 per cent. F and 2 50 per cent. P, respectively In this assumed case, six mixtures have been prescribed, two of them within the puerperal two weeks, another two within the next four or five weeks, the increase in the quantity of food required has been provided for in each instance by the addition of 8 ounces to the quantity previously prescribed, the number of ounces to be prepared having been increased successively from 16 to 24, to 32, to 40 to 48 While each of these quantities is larger than the infant requires at the beginning of the period for which it is employed, the excess represents so little value in cream and milk that the actual waste is very small

Very little saving is made by the use of fat-free or of separated milk, except for the preparation of whey, since materials sufficient for the preparation of the mixtures ordinarily required for infants above the age of 4 or 5 weeks can not be obtained from a quart of milk Generally it is best that two quarts of milk should be provided from the outset, one for the supply of the required cream, the other for the supply of the whole milk Up to the age of 6 or 8 months a pint of milk will furnish a sufficient quantity of the latter Two quarts of milk a day will not only provide for the infant throughout the period of substitute feeding, but for the infant's family also, that is, the "modified milk" having been prepared, there will be left of the two quarts from 58 ounces (about) of milk, containing 3 33 per cent of fat, when the child is a month old, to (about) 30 ounces, containing 2 per cent of fat, when the child has reached the age of 11 months With milk at 10 cents a quart, the daily cost of the cream and milk consumed by the infant up to the age of about 11 months, ranges from 2 cents at the beginning to 12 cents at the end of the period

In the use of the percentage method, both in the case of the normal infant in health and of the infant with less than the normal powers of digestion, the limitations in the ratios of fat to proteids compatible with the maintenance of nutrition must be kept constantly in mind While the infant can not be fed properly by rules, the principle may be laid down that except in certain abnormal, or diseased conditions, mixtures of which the ratio of the fat percentage to the proteid percentage, that is, to the percentage of total proteids, exceeds 3, should not be employed continuously for any length of time at any period, since they do not contain food enough, on the other hand, the use of mixtures of cream and milk of which this ratio is below 1½ taxes the digestive organs needlessly and invites digestive disorders In whey-cream mixtures containing high percentages of whey-proteids, lower ratios may be employed, though they are seldom indicated

Substantially every mixture that is required may be obtained by combining 16 per cent. cream, whole milk, fat-free, or 2 per cent whey, and in practice it is best to make use of these materials only Whey that is practically fat-free, however carelessly prepared, may be obtained from the milk from which the 16 per cent cream has been removed Twenty-six ounces of this milk will yield about 20 ounces of whey, a quantity sufficient for the preparation of any of the whey-cream mixtures that ordinarily are required

In practice it is seldom necessary to carry the percentage of caseinogen above 1 per cent., that is, if the infant is able to digest 1 per cent of caseinogen, together with the associated percentage of whey—proteids, further division of the proteids is not required as a rule.

The fat percentage of the top milk (cream) does not increase materially even if the milk is allowed to "set" long after the cream has risen, the top 6 ounces of a quart of 4 per cent milk which represents 16 per cent cream at the end of 8 hours (and the top 4 ounces, which is 20 per cent cream) will not have increased in fat-value materially at the end of 12 or 14 hours In the case of 20 per cent cream the fat percentage increases but 2 5 per cent in 24 hours [13] The thickening of the cream is due almost altogether to the growth of bacteria

If, therefore, a quart of milk is "set" at 7 o'clock in the morning, 6 ounces of 16 per cent cream [14] (or 4 ounces of 20 per cent cream), may be taken therefrom

12. This statement refers to the feeding of the normal infant in health.

13 Holt "Diseases of Children

14 The mnemonic 16 —'2 may assist the remembrance of the instructions to be given for obtaining 16 per cent. cream by gravity thus, 1 quart of milk yields 6 oz. of 16 per cent. cream at the end of 16 ÷ 2 (8) hours, its proteid percentage is 16 ÷ 2 (3 2 per cent.)

at any time after 3 o'clock in the afternoon, and preferably before 9 o'clock in the evening But, of course, the sooner the cream is removed after the full quantity obtainable by gravity has arisen, the more closely it will represent the desired fat percentage in each case It appears, therefore, that a single variety of cream, which may be 16 per cent. or 20 per cent cream, serves every purpose, that the required quantities of cream and milk for all the mixtures ordinarily required may be computed by a single series of equations, that for the normal infant but few modifications need be made, the percentages that are indicated at different ages being readily determined by the ratios of fat to proteids required, without having reference to the feeding chart, that the simple instructions to be given for obtaining by gravity the cream to be employed are the same in all cases, to be followed throughout the period of substitute feeding, that the preparation of mixtures of cream and milk presents no difficulties and that even at an advanced price for suitable milk the necessary materials cost very little

The complexity, and therefore the perplexities, of percentage modifications depend altogether on the use of a variety of creams and of milk of different analyses, if suitable milk is in use, or if the analysis of the milk to be employed is known, the mixtures usually required, at any rate, may be computed by the working equations with substantial accuracy and as readily as mixtures of drugs If, therefore, modified milk is to be employed as a substitute food for the infant, under the immediate direction of the physician, as all artificial feeding should be, percentage modification furnishes a very simple and a very practicable method for its preparation and its use

The real difficulty in the way of the scientific method, and of other methods as well, is the lack of suitable milk for the preparation of infant food, and until suitable milk is generally available, the milk-laboratory offers the best solution of the problem. Here and there "baby-milk" is furnished, and always, it is understood, the supply, at largely increased prices, is unequal to the demand that has been quickly created—among the laity, the family physician appears to be content to leave the matter of the milk supply to the average milkman, and the feeding of the infant to the enterprising and insistent manufacturers of patent foods, and the records of infant mortality, ill development, malnutrition and disease, the direct results of imperfect or improper food and feeding, continue to be written

It is true that the great majority of bottle-fed babies live, and the greater number of them thrive, apparently, in spite of dietetic adversity They live because they were born to live Infant mortality is unnatural And it is not less true that many of these fair, fat babies—all of them are fat—have less than the normal powers of resistance and recuperation, while the less vigorous, or the imperfectly developed, are subject to disorders and diseases which the well-fed infant escapes The strong survive, for precisely the same reason that the Scotchman survives his diet of oatmeal But in the case of the feeble infant, and of the dyspeptic infant in particular, health and growth and life, it may be, depend on its having the right food, which is suitable milk, suitably modified

The production of suitable milk is perfectly practicable, and the effort, even the organized effort, of physicians may well be directed to this end In view of the diminished and diminishing birth rate in American families, and of the growing indisposition and inability of the American mother to nurse the baby, the question of artificial feeding has become of vital importance to the community There is no subject within the domain of medicine, not even the control of tuberculosis, that concerns common interests and the common welfare more intimately Indeed, tuberculosis is in itself a disease of imperfect nutrition, and to provide for the nutrition of the infant may well be among effective measures for its prevention It is not unreasonable to believe that the constitution of the individual may be affected in some manner, to some degree, by the character of the food during the period when, normally, the physical development is most rapid

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SIMPLICITY IN INFANT FEEDING *

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The average physician is generally appalled by the mathematics which play so important a part in present-day papers on infant feeding He either comes to look on infant feeding as in the highest degree a difficult problem, and babies' digestions habitually delicate, requiring complicated formulæ and frequent minute changes in percentages, or he discards all theories in disgust and leaves the feeding of the baby to the mother or nurse, or even resorts to the wares and printed directions of the advertising food manufacturers Both of these extremes are undesirable

While there is no doubt that a fairly accurate idea of percentages is of great value in infant feeding, and that the difficult cases can be managed best by keeping these well in view, yet it is perfectly possible for a physician to feed babies successfully without this expert knowledge and to give simple directions for the preparation of the food without the use of formula lists or patent foods

NEED OF SIMPLE RULES

It is evident that the simpler the rules and formulæ for making up the daily food of the baby, the less liability will there be for error on the part of the mother or nurse and the easier it will be for the physician to prescribe It is also reasonable to suppose that the less the milk is manipulated in order to obtain the desired formula the more easily will it be digested by the infant

The physician who looks on the baby's stomach as a test tube and on the food merely as so much per cent of different ingredients is apt to disregard every factor but the percentages and to blame the baby and not the food if the former does not thrive Theoretically the food is right and the baby at fault.

NEED OF STUDYING CASES INDIVIDUALLY

Some infants thrive on mixtures made up of centrifugal cream and fat-free milk recombined so as to give the theoretical percentages required But the fact that others do not, and yet will thrive on similar percentages made up of gravity cream, shows that there is something besides chemical percentages that must be considered—some vital characteristic as yet but little understood In the same way the fact that while many infants thrive on Pasteurized or even sterilized mixtures, yet others grow pale, lose their appetite and develop scurvy, shows that certain characteristics of the milk destroyed or

* Read in the Section on Diseases of Children of the American Medical Association at the Fifty-seventh Annual Session, held at Atlantic City, June 1906

altered by heat must be considered as well as its chemical composition

Another fact is brought out by these observations, namely, that infants are not machines and that they can not all be treated alike It is evident that we should avoid, if possible, what is harmful to some infants even if others are not disturbed thereby Because an infant of a year appears to thrive and be in robust health on a diet which includes tea and cabbage, no argument should be adduced in favor of tea and cabbage

NEED OF SPECIAL BREED OF COWS

The basis of infant feeding is the milk of some animal, and for practical purposes we are limited to the cow When one considers what great modification in external forms has been accomplished by artificial selection in the case of dogs and pigeons, for example, it is not, I hope, idle to expect that some day a race of cows will be developed by careful breeding and selection whose milk shall approximate very closely in chemical analysis the milk of woman The difficulties in the way of artificial feeding would then be less, although the differences in the vital characteristics of the two milks can never, of course, be eliminated At present we must take cows' milk as we find it and modify it to suit the infant's digestion

NEED OF MILK INSPECTION

When milk commissioners give their seal of approval the responsibility of the physician is much lightened Certified milk means cleanliness in the cows, barns, utensils and milkers, freedom from disease in the cows and consequently a clean safe milk In the absence of a milk commission it is incumbent on the physician to look into these matters as closely as may be, visiting the dairies if possible *It is far better to use a raw, dirt-free and therefore germ-free milk than to take a dirty milk and detroy its vitality in endeavoring to cleanse it by centrifugal force or by Pasteurization* Both processes are undesirable The latter process does not destroy the dangerous butyric acid and peptonizing bacteria, but it does affect the lactic acid group, which, when active, serve to check the more dangerous bacteria

CENTRIFUGAL CREAM AND GRAVITY CREAM

As the dilution of whole milk in order to diminish the percentage of albuminoids will cut down the fat too low, it is necessary to begin with a cream as the basis of our modifications By the dilution of a 10 or 12 per cent cream and the addition of sugar of milk we can make up a mixture fairly comparable to woman's milk To obtain the cream several practical methods are open to us Centrifugal cream can be obtained at dairies, but it is undesirable owing to the changes that have taken place in its physical or vital characteristics This cream, as sold at most dairies, does not have even the merit of accuracy of percentage Gravity cream may be obtained by siphonage This is rather a complicated and delicate process and the siphon is a difficult instrument to clean Dipping off the top milk with Chapin's dipper is a good method, but here also is an instrument to be kept clean Pouring off the top milk is the simplest method and is perhaps looked down on by some on account of its very simplicity There are no instruments to be kept clean The results by this method are very uniform, as I have shown by numerous analyses [1]

1 'Cream for the Home Modification of Milk' Boston Med. and Surg Jour, vol cxlviii, 1903 p 414

DILUTIONS

The richness of the cream can easily be varied by pouring off more or less of the top milk Although the exact amount of fat can not be told without analysis, the latter is rarely necessary, as a certain amount of experimentation is required for every infant. As a rough rule, one may remember that the upper eight ounces poured from a quart of milk after it has stood at least four hours contains about 10 per cent of fat, the upper twelve ounces about 8 per cent, the upper sixteen ounces about 6 per cent. and the upper six ounces about 14 per cent

The physician must be guided by symptoms and the appearance of the stools and regulate the amount of fat accordingly It is easier and better, as there is less manipulation required, to dilute this top milk with water than to combine a rich cream, a lower or fat-free milk and water This latter method involves an unnecessary splitting up and recombination of ingredients

Instead of using water as a diluent or modifier, a cereal water—barley, oats, rice or wheat—can be used even in the youngest infants There is no doubt that the cereal renders the milk more digestible by lessening the size of the clots, and also that a small amount of starch is digested even by the newly born This return to an older method, used empirically for ages, has now a scientific foundation Most babies do perfectly well with water as a diluent, but some have difficulty in digestion unless a cereal is used After the age of six months all babies, with but few exceptions, are better with cereal modifications

HOW TO FEED AN INFANT

In beginning to feed an infant, whether it be a new-born or an older one that has suffered from improper feeding, the safest rule is to begin with a mixture weak in all its ingredients, and by slow degrees gradually increase the strength The mistake is often made of beginning too strong and in making frequent and purposeless changes Thus a new-born baby can be put on a mixture in which there are only three ounces of the upper eight ounces of top milk in twenty ounces, and the strength gradually increased by the addition every second day of half an ounce more top milk and the subtraction of half an ounce of water until eight ounces of top milk are given in a twenty-ounce mixture

It is gratifying to find that many infants who have struggled unsuccessfully on much modified milk mixtures will often respond at once when these simple, but, it seems to me, all important principles are borne in mind

NOTE.—In this article I have purposely avoided all reference to the calculation of percentages, knowing by experience what a paralyzing effect such reference has on most physicians' minds For those who care to venture on this subject, which is not necessarily difficult, the following simple rule will be found easy of application

Rule.—Each ounce of 10 per cent cream in a 20 ounce mixture represents 50 per cent of fat, 20 per cent of albuminoids and 20 per cent of sugar, and each even tablespoonful of sugar of milk added to this mixture raises the percentage of sugar 2

In the example given above, in which the infant is started on 3 ounces of the upper 8 ounce top milk in a 20 ounce mixture, the formula would be written as follows

Top milk	3 ounces
Water	16 ounces
Limewater	1 ounce
Sugar of milk	2½ even tablespoonfuls

Assuming that the top milk contained 10 per cent of fat,

this would mean, approximately Fat, 1 50, sugar, 5 60, albuminoids, 60

The final formula of

Top milk	8 ounces
Water	11 ounces
Limewater	1 ounce
Sugar of milk	2½ level tablespoonfuls

would mean, approximately Fat, 4 00, sugar, 6 60, albumin oids, 1 60

The percentage of fat in the top milk can be gradually diminished by pouring off more of this top milk from day to day In this way the strength of the albuminoids can be gradually increased in the mixture without increasing the fat beyond 4 per cent When a cereal water is used in place of water, only one half as much sugar of milk is necessary and no limewater is needed The value of limewater in the water mixture is somewhat doubtful

CERTIFIED MILK IN SMALL CITIES *

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Forty-nine states and territories have laws applying to the production and care of milk and its products, while a large number of municipalities have ordinances governing its quality, transit, care and sale All these laws and ordinances, with possibly one exception, apply chiefly to the amount of butter-fat and total solids the milk must contain and not to the quantity of extraneous matters or to the bacterial count.

Interest in and knowledge of milk and foods is increasing both in the medical profession and among the laity, if the numerous articles of scientific and popular interest in the medical and lay journals can be adduced as evidence But in spite of this interest and increase of knowledge, the fact remains that ordinary milk, while of almost universal use, is the most uncleanly article of food on our tables

STERILIZATION AND PASTEURIZATION

That the average milk is unclean and many times unfit for food, especially for infants, has long been known and has given rise to its heating or cooking in order to lessen its unfitness and lengthen its keeping quality This process we call sterilization

A few years later it was found that this process was fraught with danger and that practically a lower degree of heat and a shorter period of heating served as well Pasteurization was then the vogue for a time Now it is safe to estimate "that all forms of sterilization do impair, although possibly to a slight degree, the nutritive properties" of milk That commercially Pasteurized milk is more unsafe and less to be trusted than ordinary milk is abundantly proven by the investigations of Pennington and McClintock of Philadelphia What is true in Philadelphia is probably true of Pasteurized milk sold in other cities

We would naturally anticipate that hospitals would be furnished with good milk, yet Edsall found many of them in Philadelphia served with milk of "shocking quality," some of it containing millions of bacteria to the cubic centimeter

I need not say that when it can be obtained the desideratum is fresh, clean milk, so fresh and clean that it can be safely used raw, either for the food of infants or sick adults The best milk can now be procured chiefly in the large cities The Walker-Gordon Laboratory Company, a commercial enterprise, supplies a high-grade milk to eleven of the largest cities in the United States and two in Canada

MILK COMMISSIONS

The first medical milk commission was that of Essex County, N J, formed and pushed to success by Dr Henry L Coit, of Newark It issued its first certificate in 1893, only thirteen years ago Others which have started since are the Milk Commission of the Medical Society of the County of New York, the Milk Commission of the County of Kings, New York, the Milk Commission of the Philadelphia Pediatric Society, the Milk Commission of the Children's Hospital Society of Chicago, the Milk Commission of the Milwaukee Medical Society, the Milk Commission of the Rochester Academy of Medicine, the Milk Commission of Cleveland, Ohio, the Milk Commission of the Syracuse Academy of Medicine, Syracuse, N Y, the Milk Commission of the Medical Society of the District of Columbia, the Milk Commission of the Medical Society of St Louis, Mo and the Milk Commission of the Elmira Academy of Medicine, Elmira, N Y One or two others have been started, but have been discontinued All of these milk commissions are in cities of the first and second class except the last one, Elmira, which has a population of about 35,000

THE ELMIRA MILK COMMISSION

In the list of 136 cities in the United States having a population of 30,000 or over, Elmira stands one hundred and thirty-third Because of the successful accomplishment of the work of our commission in a small city, an ex-president of this Section suggested that its story be told here, and that is why I presume to stand before you to-day that others among the smaller cities may be stimulated to begin to secure the production of clean milk

Six years ago an eminent pediatrist of New York City said, in a clinical lecture, "that if five or six physicians in any town wanted clean milk it could be had" That was a suggestion In due time a paper was read before the Elmira Academy of Medicine on "Clinical Milk What It Is and What It Should Be" Much interest was aroused Six men who were interested in the subject were selected and later were appointed the Milk Commission of the Elmira Academy of Medicine Then the search for the farmer began A circular letter was sent by the commission to about half of the ninety milk dealers of the city, those who either produced their own milk or were responsible, calling a joint meeting of the dealers and the commission Not more than twenty responded They listened curiously, respectfully, but that was all

We next began to visit the better class of dealers at their farms with negative results until we found one who was already trying to do better than the average milk dealer as to cleanliness and good fat content This one, a woman, had visited near one of the most famous milk farms in the country and had already a general knowledge of the benefit of clean milk and the requirements to produce it After consideration she took up the work, built a new barn had her herd tested for tuberculosis, the commission selected its experts and we issued our first certificate April [illegible] 1903 We established as our standard a 10 C [illegible] has been exceeded

* Read in the Section on Diseases of Children of the American Medical Association at the Fifty seventh Annual Session June 1906

3 5 per cent to 4 5 per cent, and other usual conditions were imposed The milk is cooled and bottled within a few minutes after it is drawn, put in the crate, the top of which is filled with cracked ice, whence it is delivered to the consumers Because of the nearness of the farm to the city, less than three miles, the night and morning milk is delivered, reaching the consumer not more than nineteen hours from the time the oldest of it was drawn the night before This has not been accomplished with the aid of an agricultural college graduate, or even an up-to-date farmer, but simply by using the means at hand Our farmer employed the same foreman she had before, guided, of course, by the commission and its experts

In spite of the fact that our farmer will not allow the slightest bit of commercialism in its sale, not even the sending of the commission's certificate to physicians in the patronizing territory, the output is slowly but satisfactorily increasing and Quarry Farm milk has grown in favor with laymen as well as physicians Besides supplying local consumers, it is shipped daily to Binghamton, N Y , and New York City It sells at 8 cents per quart, ordinary milk at 6 cents during the cold months and 5 cents during the warm months

Another dealer, also a woman, sells a high-grade milk exclusively in bottles

Besides the direct benefit to the immediate consumer, there has been a general improvement in the whole city milk supply Our health officer is a member of the milk commission and through his influence the board of health has passed an excellent ordinance governing the sale of milk The milk inspector of the local board of health has been made a state deputy health officer, thereby empowering him to enter on the premises of the producer All the dealers will now, on request, supply milk bottled at the farm In former days I have not infrequently seen them bottle the milk as they drove along the dusty streets

A PRACTICAL CONCLUSION

Elmira is not especially wealthy, nor are its inhabitants remarkably intelligent, nor are its physicians greatly more learned and skillful than those of other cities of similar size, yet here the time seemed ripe and the "five or six" were at hand when needed for the establishment and oversight of a successful certified milk plant What we have done in Elmira I am sure can be done inside the next twelve months in a score of the other 124 cities of the United States containing 30,000 or more inhabitants which are now unsupplied with clean milk.

There are two great hindrances, it seems to me, to the rapid and successful progress of right infant feeding in cities First, there is the difficulty in most of them in securing fresh, clean milk, partly for this reason we note the immense sale of artificial foods Second, there is the widespread and lamentable lack of knowledge among physicians how properly to modify or adapt cow's milk to the infant The responsibility for the first is on the physicians themselves in each town, for the second on the men who are teaching pediatrics in medical colleges and postgraduate schools There may be some difficulty in finding the right man for producer It may take considerable time and pains It did in our case, but near each city is some farmer who is longing to do his work better than his neighbors and who is only waiting for you to show him the way So Dr Coit found Francisco and we found Mrs Crane

WHY PERCENTAGE FEEDING FAILS

A PLEA FOR ITS MORE FREQUENT ADOPTION BY THE GENERAL PRACTITIONER *

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The subject of feeding infants under 1 year of age artificially has occupied some of the brightest and best minds of the profession Among these authorities it has been clearly established that the best substitute for human milk is cow's milk so modified that it shall resemble the former in its essential chemical, physical and biologic characteristics and that these shall be adapted to the individual infant

While it is true, and must be considered clinically, that the most accurate quantitative modification of bovine milk can not transform it into human milk, pediatrists are agreed that the best results are obtained by the so-called fractional or percentage method of feeding, however they may differ as to the best method of modification Percentage feeding, not unlike most valuable medical facts, is a product of evolution and of many minds It follows, therefore, that its history contains much that is indispensable and much that is useless Many of the latest text-books have thus far failed to eliminate the latter from their pages Many teachers fail to impress students with the essential facts with the result that they enter practice regarding infant feeding as a Chinese puzzle, unsolved and unsolvable

Apparently contrary to its absolute scientific and practical worth, failures are numerous and this system of feeding is not only brought into disrepute, but is even ridiculed by many general practitioners of large experience Recognizing the existence of these failures, a study of the causes that are operative in their production becomes essential to their prevention and to emphasize the simplicity of percentage feeding when once mastered and shorn of its mystery

BEWILDERING MULTIPLICITY OF METHODS OF MODIFICATION PROPOSED

The number of methods of modifying bovine milk is almost innumerable One very recent text-book describes thirteen The majority of others detail about six Of these the major portion consists of rows on rows of figures which, even if valuable, can not be committed to memory, but must be consulted each time a formula is prescribed These authorities err in presenting a method worked out instead of detailing its principles If principles are taught and mastered, their application becomes a matter of ease The multiplicity of methods proposed causes confusion and excites suspicion that none is accurate or reliable, that the whole subject is simply the algebraic product of some mathematical brain and of no practical worth Herein lies the cause why so many practitioners refuse to consider the matter further and consign it to the consideration of the pediatrist alone What is necessary is that the physician should select one method of modification and master it in all its details He can thus become familiar with every phase of it and in a brief space of time it will dawn on him what a simple matter percentage feeding is after all Of the many methods of home modification

* Read in the Section on Diseases of Children of the American Medical Association at the Fifty seventh Annual Session, June, 1906

proposed, Holt's top-milk method appears the most rational and the easiest of application It takes nothing for granted and permits the physician to arrange almost any combination of proteid, sugar and fat Next to this Bauer's method would probably stand

METHODS ARE NOT INTELLIGENTLY APPLIED

It matters not how well one may learn any single method of modifying milk, if he fails to apply it intelligently his efforts will be for naught. He must realize that he is dealing with an individual whose digestive apparatus is his own Formulas are arranged to meet symptoms, and changes must be made as they become necessary It must be clearly understood that our object is not to supply a percentage composition identical to the accepted analysis of human milk, but to adjust the quantities of proteid, fat and sugar to the infant's digestive powers It must ever be remembered that we are feeding to human beings a fluid that Nature intended for calves Consequently we must begin with weak mixtures and gradually increase the strength as the infant's digestive and assimilative powers are slowly unfolded It is usually wise to start a newborn infant on 1 per cent. of fat and 33 per cent of protein These quantities are increased until at about 6 months the fat has reached 4 per cent and the proteins 2 per cent It is never safe to give more than 4 per cent of fat at any age and a more conservative and wiser practice would never exceed 3 5 per cent Young and sick infants tolerate comparatively high percentages of sugar, from 5 to 6 per cent at birth This is rapidly increased to 7 per cent At 9 months it is diminished, and at 1 year the healthy infant is receiving 4 per cent of sugar and a similar quantity of protein, or, in other words, undiluted cow's milk Sick infants are to be fed formulas which are one-half or one-fourth the strength of those fed to well children of the same age The same is true of the amounts and the interval of feeding These must be carefully adjusted to the infant's stomach capacity and its appetite

THE WRITTEN FORMULA NEED NOT REPRESENT THE ACTUAL PERCENTAGES

While it is desirable that the finished milk mixture should correspond in strength to the percentages represented by the written formula, practically it is almost impossible to secure this by any method of modification Nor is it essential to a successful result Whether modified at home or in the laboratory, the first formula is an experiment The actual quantities must approximate the desired percentages It matters not whether the finished formula contains, e g , 1 5 per cent or 1 75 per cent of fat or 5 per cent or 6 per cent of protein, the essential thing is whether or not the infant can digest it Then, as the indications direct, the amount of any or all the ingredients may be changed With this in mind the physician is at once less confused Otherwise he loses sight of the individual in his zeal to secure absolutely accurate percentages Finally realizing that he is striving after the impossible, he discards the whole matter as useless and impractical

PHYSICIANS AND PARENTS EXPECT GAIN IN WEIGHT TOO SOON

An infant newborn or older, or an infant suffering from chronic gastrointestinal catarrh, placed on percentage feeding, will not commence to gain at once but may even lose a few ounces Especially if he has attempted percentage feeding as a last resort, this often causes the practitioner keen disappointment A gain in weight should not be looked for too early In fact, it is clearly erroneous to expect it Attention should first be directed to the infant's stools, to its general well-being and to the disappearance of all untoward symptoms If the stools lose their green character, if the number of curds and the quantity of mucus are gradually diminishing, if colic disappears, if fat is no longer present in the evacuations, if diarrhea or constipation is replaced by one or two golden-yellow, well-digested movements a day, if vomiting ceases and the infant sleeps the greater part of 24 hours, a gain in weight will be inaugurated and will be continuous, especially as the strength and quantity can be increased Newborn and sick infants do not gain in the beginning because they are placed on formulas which are deficient in quantity and quality The physician must, therefore, wait until he learns the infant's digestive powers or until digestive disturbances cease before he should expect a gain in weight

PHYSICAL AND BIOLOGIC DIFFERENCES BETWEEN COW'S AND HUMAN MILK NOT SUFFICIENTLY RECOGNIZED

While it is important to recognize that bovine and human milk differ quantitatively as to their protein and sugar content, it is more necessary, clinically, to consider their physical and biologic differences It follows, therefore, unless these differences are overcome, our formula will fail in spite of the most accurate adjustment of percentages to the nutritional demands of the infant In the presence of rennin and dilute hydrochloric acid the calcium casein of milk is changed to calcium paracasein This is commonly called the curd That of cow's milk is thick, dense and tough, that of human milk is soft, feathery and flocculent It has been clearly demonstrated by the brilliant work of Chapin that the character of the calcium paracasein (curd) influences largely the subsequent development of the intestinal tube of the mammal for which it was intended Therefore, human sucklings can not digest the curd of bovine milk with any degree of satisfaction In fact, this physical difference between the curds of these two milks is the crux of the whole problem of infant feeding Failure to recognize it is the cause of 90 per cent of the failures of percentage feeding It is the rock on which the majority of artificially reared infants are wrecked The physician must, therefore, attempt to transform the physical characteristics of the cow's calcium paracasein into those of human calcium paracasein This can be accomplished, to a certain extent, by the use of plain or dextrinized cereal gruels or waters by decalcification with sodium citrate, as first described by E A Wright and recently emphasized by Poynton, of London In special cases the curd may be entirely eliminated by the use of whey or it may be peptonized temporarily

Bovine milk contains germs Human milk is practically sterile. Insensibility to this well-known difference frequently results in disaster The sources of germ contamination should be recognized They are many and varied Probably the most important source of initial contamination is the air of the stable This fact has received recent and positive emphasis from the work of A H Stewart, of Philadelphia The physician should have a thorough knowledge of the milk supply, the method of milking, the care of the cows, the cans bottles and the stable, the handling of the milk on the farm, the shipping and the icing of the cans and the care of the milk

in the shops The contamination with and the subsequent growth of micro-organisms should be prevented in every possible way It has been well stated the time between the cow and the baby should be shortened When the milk diluent is water the latter should be boiled Cane sugar is preferable to milk sugar because it is cleaner Bottles and nipples should be sterile In cities home Pasteurization of milk is advisable Clean milk is an essential absolutely necessary to successful infant feeding The gastrointestinal disturbances, especially infantile dysentery, that are responsible for over half of the morbidity and mortality of infant life, have their origin in infected milk Therefore, while Pasteurization is recommended, it is more rational, and decidedly more safe, to prevent the initial contamination on the farm

PHYSICIANS DO NOT DIAGNOSE THE VARIETY OF INDIGESTION

A potent and frequent factor of failure is that physicians do not recognize which particular element of the food is at fault Milk, in this connection, is erroneously regarded as a simple substance instead of a complex mixture of fat, sugar and protein, any one of which may be the cause of trouble The symptoms of indigestion vary as the cause A careful history as to vomiting and a thorough inspection of the stools will usually permit of a correct deduction It is, therefore, necessary to designate "fat" indigestion, "protein" indigestion or "sugar" indigestion, as the case may be, in order that the amount of the offending ingredient may be changed or temporarily eliminated

PHYSICIANS DO NOT THINK IN PERCENTAGES

One common cause of failure is that the practitioner will not or can not learn to think in percentages The indiscriminate mixing of so many ounces of milk, water, cream, lime water and sugar is irrational, unscientific and pernicious If percentages are prescribed the ounces will take care of themselves when the former are applied to some simple method of modification To be able to exhibit the proteins, fat and sugar of cow's milk in approximately definite percentages is not only a source of comfort and satisfaction, but is productive of the best results, especially when these may be varied at will according to the indications to be met

MOTHERS AND NURSES ARE NOT EDUCATED IN PEDIATRIC HYGIENE

Physicians fail to teach the mother or the untrained nurse the details of mixing the various ingredients of the milk formula, for the reason that they assume that their orders will not be carried out That this assumption is correct, in most instances, can readily be proven by any one who has had much experience in feeding the infants of the poor The physician need but lead in enthusiasm and the mother will be most eager to follow Personally I have attained some of my best results in the homes of the poor with large families and with dispensary patients Let a mother but understand that you are interested in the welfare of her infant, both present and future, and no sacrifice will be too great It is the physician's duty, nay, his privilege, to go into the kitchen to demonstrate to the mother how to secure top-milk, what is meant by ounces, how to make cereal waters, how to prepare whey, how to peptonize, how to make lime water, how to mix the food, how to divide it up into bottles, how to Pasteurize, how to ice the milk and how to take care of the bottles and the nipples The mother can be taught these hygienic details at the expense of very little time They soon become a habit and the success of the modified formula is assured

LACK OF PROFESSIONAL SUPERVISION

Feeding cases should be carefully watched During the first month, at least, they should be seen once a week When expense is no desideratum this weekly inspection should be continued longer When it does exist nothing will be lost by making the visit gratis One is well repaid by the satisfaction of seeing the infant grow fat This inspection should not be confined to the infant but should extend to its food and the hygiene of the entire nursery Only in this way can the physician keep in touch with his charge, detect and correct errors, educate the most ignorant mother, little by little, and himself learn more about infants and infant feeding than by months of reading Weekly weighings should be made and recorded on a weight chart if possible. By this means the physician is furnished with an index as to the nutritional qualities of the food and also as to whether the strength and quantity are to be increased

The food should be exhibited in definite amounts at designated hours Neglect in this respect may be disastrous It is better to underfeed than to overfeed Most examples of starvation are examples of overfeeding The quantity of a feeding can represent the infant's age in months After six months this progression is somewhat slower, a child of one year receiving about 10 ounces This applies only to healthy infants In increasing the amount, the increment should not exceed one-half an ounce at a feeding In many cases it is unwise to exceed a quarter of an ounce

Professional supervision includes an inquiry as to the character and frequency of the stools, as to vomiting and the time of its occurrence, the number of hours the infant sleeps, its manner while awake and as to the color of its urine Failure to attend to these details may invite failure of the formula notwithstanding its accurate composition

PHYSICIANS AND PARENTS DELUDED BY PATENT FOODS

The ease with which proprietary foods are prepared is one reason why physicians and parents are so eager to feed them to the infant. Their large sugar content often causes the infant to fatten rapidly Their preparation is made more easy by the directions plainly printed on the label They require little thought from the mother and less from the physician The latter at once feels relieved of all responsibility What a delusion! How many babies are made chronic dyspeptics and suffer from chronic skin eruptions? How many fat anemic infants have rickets, scurvy, club-feet, bowleg, knock-knee, spinal scoliosis and a resistance so weakened that they can not withstand the acute infections? Their number can alone be appreciated by the pediatrist who receives them after they have passed the gamut of patent foods and through the hands of many physicians As a makeshift, as a temporary food while on a journey or when cow's milk can not be obtained these foods are of service As a permanent infant food they are a delusion and a snare.

[FOR THE DISCUSSION ON THIS SYMPOSIUM ON MILK FEEDING, SEE PAGE 641]

Fever in Tuberculosis.—L. Sexton, New Orleans, states that fever in tuberculosis produced by exercise or exertion does not occur immediately, but follows in about five or six hours the same as from a tuberculin reaction

THE ALCOHOL QUESTION IN THE NAVY

WITH SUGGESTIONS AS TO ITS RESTRICTION *

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The remarks I shall make to you will be mainly confined to the problem as it affects the personnel of the Navy. After a service of over thirty years in all parts of the world, under the varying conditions of peace and war, I am convinced that the use of spirituous drinks should be discouraged and limited as far as possible, and yet I recognize that laws to prohibit their sale *in toto* can not be enforced and, as a rule, have proved of doubtful value. During my naval service the necessity for temperance has increased very greatly. As the huge floating machines of war have grown in force they require more intelligent and skillful handling to keep them effective. There is no place on a man-of-war for one whose brains are dulled and whose hands are tremulous from drinking. Even those filling very subordinate positions may readily hazard the safety of the ship and the lives of the crew by thoughtlessly leaving a valve open or an uncovered light near explosives.

It is difficult to ascertain the amount of intemperance in the navy, but I have thought that the admissions to the sick list for "alcoholism" would be as correct an index as is available. In the United States Navy in the last three years there were 753 cases of alcoholism or 251 a year for an average force of 36,347 men, and during this period there have been 13 deaths from this cause. The admissions have been nearly 7 for 1,000 men (6.9).

I have taken for comparison the English and the German navies, as their reports are fuller and the personnel is essentially of the same race as our Navy.

In the German Navy, with an average force of 31,000 men, there were in 3½ years sixteen cases of alcoholism admitted to the sick list, less than 5 a year.

In the English Navy in the last three years there were 251 admissions for alcoholism, an average of 84 a year, and the average strength of the navy was 104,000 men.

The ratio of admissions in the three navies is

United States Navy	6.95 per 1,000 men
English Navy	.77 per 1,000 men
German Navy	.14 per 1,000 men

There are nearly ten times as many admissions for alcoholism in the United States Navy as in the English Navy, and nearly 50 times as many as in the German Navy. Our Navy makes a very poor showing in comparison with those of England and Germany. But the admissions for alcoholism indicate only partially the amount of sickness due to drinking, and very imperfectly the amount of drinking. Only those cases appear in the medical reports which require treatment for several days. This is shown by the fact that the 260 cases treated in 1904 account for 1,345 sick days, or, in other words, the average patient was ill for a little over five days. The majority of the cases of drunkenness do not appear on the medical reports, and are not seen by the medical officers. Intoxication in the sailor is looked on as a pardonable offense, and if he is quiet and orderly he is allowed to go forward and sleep off the effects of his carouse. If noisy and troublesome, he is placed under charge of a sentry and when he is again sober he is released and returns to duty. It is only in the exceptional cases when after the lapse of 12 or 24 hours he remains unfit for duty that the medical officer sees him. Injuries received while drunk and diseases contracted from carelessness while intoxicated appear under their appropriate headings and not under alcoholism.

We see that from the medical records alone we can form but an imperfect estimate of the amount of intemperance in the Navy. It is very difficult to estimate even approximately the number of men who return from liberty unfit for duty from drinking, and on asking an old medical officer what his opinion was he placed his estimate at about 2 per cent. of those going on leave. This, I believe, is very conservative and well inside of the actual number.

Beside the phases of the alcohol question which I have spoken of, there is another which is of the greatest importance for the health of the sailor and the efficiency of the Navy. This is the very close connection between alcohol and venereal disease. It is difficult for a person living on land to realize the very great importance of venereal diseases in the Navy—where over 25 per cent. of the whole time lost through sickness and injury is due to venereal affections. Very many of these diseases are contracted when the sailor is heated by alcohol and commits excesses he would not if sober. Again, it is well recognized that the drinking man is more liable to contract other diseases than the temperate man, this is particularly true of the various tropical diseases to which the sailor is more exposed than other men and probably true, also, of pneumonia and tuberculosis. We can not fail to realize the very great importance of the drinking habit and how through injuring a man both mentally and physically it renders him a less valuable servant to the government. Before we consider the means for restraining this habit and diminishing the evils resulting from it, I think we should try to ascertain why drinking is so general in our Navy and why it is apparently so much more prevalent among our sailors than it is among the men in the English and German navies. I believe that the American people are quite as temperate as the English and German, but the same is not true of our sailors. There are several reasons why the sailor is more liable to indulge in the use of stimulants than his fellow who lives on land.

A young man—for the large majority of sailors are young men—when he goes on board a man-of-war, finds that, while he is subjected to many new restrictions, he is, also, freed from many of the restraints which surrounded him on land. He finds himself in an atmosphere where drinking is popular and where occasional drunkenness is regarded with indulgence. He sees that the majority of his associates drink, and that most of the officers take their daily beer if nothing stronger. He may hear the chaplain and a few others advocate total abstinence, but the practice of the majority weighs down the precept of the few. He sees, too, that the ordinary lapses from temperance are not severely punished and that the temperate man is not rewarded or preferred. When he goes ashore in a foreign port, and also in many of our own, what are the places which welcome him? In many places the only houses where he is received hospitably and where he is treated as the equal of any man is the saloon. And the saloon is only too common. Visit any of our navy yards and see what are the buildings which cluster around the entrance or line the opposite side of the street. Again, visit one of our largest seaports and go along the water front, the famous Barbary coast and what are the shops that outnumber all the others? The saloons, some fairly respectable but too

* Read in the Section on Hygiene and Sanitary Science at the Fifty-seventh Annual Session of the American Medical Association, Boston, 1906.

often low dives, in which whoever enters after nightfall truly leaves hope behind

The water fronts of most ports are much the same whether in Asia or America, lined with saloons which live off the sailor, where the rapacious man and lowest harlots join efforts to allure and fleece the man perhaps now ashore for the first time in months In these places he is fortunate if he loses only his money and does not carry back to his ship disease which may last him for years

But the leading motives which lead the young sailor to drink are those of good fellowship and the example of the older men When after a stay on board of a ship lasting very likely several weeks he steps ashore with a party of his shipmates in Manila, Nagasaki, or any other foreign port, there is always some one who will propose a drink and perhaps take the party to an old acquaintance who receives the boys only too cordially, and round after round of drinks follow in quick succession The young man can not be much blamed for staying with his mates, for if he left them he would be looked on as churlish and very probably become the object of their witticisms Then, too, a person landing for the first time in a strange place does not know where to go If he falls into the hands of a resident touter who is only too ready to make friends with him and show him the town, he will probably fare worse than if he had stayed with his mates who would look out for him and at all events, see that he got safely back to his ship

From all these motives the young sailor only too soon acquires a taste for drink, and he is fortunate if he does not become addicted to whisky and other spirits The worst fate which can befall him is to fall a victim to the cheap native spirits such as the vino of the Philippines, whose use is more dangerous than opium

There remains for our inquiry the question why alcoholism, and presumably the drink habit, is so much more frequent in the United States Navy than it is in the British or the German As I mentioned a short while ago, there are nearly ten times as many admissions per 1,000 men for alcoholism in our service as in the English Navy and nearly fifty times as many as in the German Navy The United States Navy, too, is the only one of the three navies where there is a total prohibition of all alcoholic beverages In the English Navy a ration of rum is issued every day, and in the German Navy, while there is no regular issue of spirits, the sailors are allowed to buy beer from the canteen

During the Civil War the grog ration was abolished by act of Congress and there has been none issued for over 40 years During the ten years between 1890 and 1899 the sailor was, on some ships, allowed to buy beer from the bumboat, but this privilege was abolished and for six or seven years the sailor has not been allowed to have any stimulants We may say that for the greater part of forty years the United States Navy has lived under laws of total prohibition which are better enforced than such laws generally are, for there are no convenient drug stores where bitters containing a large percentage of alcohol can be bought, nor fruit stands where soft drinks are sold which can hardly be distinguished from lager, and where there is cider which has been fortified to preserve it

It seems strange that the only one of the three navies where prohibitory laws have been in force for over a generation is the very one where alcoholism is most common, but I believe that prohibition, instead of favoring the cause of temperance, injures it Not on board ship alone, but on land also, prohibitory laws are often poor agents in securing temperance I never could see that sailors were more temperate in the ports of Maine than in New York, and quite as many returned from liberty who had evidently been indulging in stimulants The majority of young men who go to sea drink more or less, and I think that the number of total abstainers is very small It is difficult to ascertain the figures accurately, but I remember several occasions, as Christmas and Fourth of July, when the men were allowed to have beer with their dinner, and there were very few who refused it The majority of the men who drink prefer beer, a much smaller number drink whisky and a small percentage drink to excess And in coming to a consideration of the means by which we can limit the evils of drinking I wish to emphasize that we are considering the problem as it affects men who very generally drink, mostly in moderation

In studying the means we can employ to diminish the evils resulting from alcohol I would place much reliance on the education of the sailor He should be shown that the use of alcohol is injurious both mentally and physically, and that even a small amount of spirit, when taken regularly, will eventually injure his health, render him more liable to disease, and almost certainly shorten his days, and this, too, when the quantity taken is too small to cause intoxication The steady drinker who takes a few drinks of spirit every day is more certain to suffer from it in the long run than the man who gets intoxicated once in two or three months, as the old-time sailors did I believe he should be taught the great difference in the effects caused by spirits produced through distillation and those from the light wines and malt liquors where the alcohol is produced by natural processes of fermentation In wine-growing countries there is little drunkenness and few of the diseased conditions so often caused by spirit drinking The Italians are a striking example of a hard working people who habitually drink wine and rarely become intoxicated In California, where I have lived for several years, they are very industrious and successful and they all drink claret freely

I believe that we should labor earnestly in the navy to elevate the prevailing opinion on the question of temperance This feeling is much feebler than it should be We all admit that temperance is desirable, but we do not reward it practically We look with altogether too much leniency on overindulgence in stimulants Provided a drinking man is quiet and does not commit any overt act, his weakness is overlooked or he is so lightly punished that he feels he has been guilty of a very pardonable offense

When any one on a ship is unfit for duty, if only for a few hours, from the effects of drink, he should at once be made to feel that he is a man who can not be trusted, and that the man who is always fit for duty will be preferred over him It should be clearly understood that the rewards are for the temperate alone, and that he who lapses even rarely, must be contented with a subordinate position This is only justice for the temperate man and for the government, too, for in a responsible position no amount of brilliancy can palliate or counterbalance a possible unfitness for duty when caused by alcohol

Beside promotion and consequent increase in pay there should be other privileges, as more frequent and extended leave, given to the man who is always ready for duty and has proved himself worthy of trust When this is once clearly understood in the Navy I believe that there will

be a powerful incentive to temperance, that public sentiment will be strongly influenced for the better, and it is really on this sentiment that we must rely more than on any other one agent If we can make it the fashion in the Navy to be temperate, whether this comes from moral conviction or from self-interest, we shall have gained much of the battle.

As another means of lessening the evils of spirit drinking and encouraging true temperance in the Navy, I think we should consider the advisability of allowing, under proper restrictions and supervision, the sale of malt liquors and light wines at the canteens on board ship and at navy yards The subordinate officers on a ship, the warrant officers, machinists, gunners, electricians, and others, are men of intelligence and education Under the direction of the commissioned officers they are entrusted with the performance of the most important duties on the ship They are intelligent, self-respecting men, who behave themselves as well as, if not better, than the average citizen on land, and they are not allowed to have any light wine and beer I believe that these men who have shown themselves fit for the most important positions on the ship, might be safely allowed a glass of beer or claret

Life on a modern man-of-war is arduous and trying and there are scarcely any means of diversion I have been on ships where even card-playing was forbidden It is absolutely necessary for a man living under these conditions to have recreation and amusement when off duty When he goes ashore at a navy yard there is no place where he can pass an hour or two pleasantly and innocently As soon as he passes through the gates he sees only too many places inviting him to enter These places, with few exceptions, are poor saloons frequented by the lowest of both sexes who gain their livelihood by corrupting the sailor The quality of the stimulants sold is very poor and often drugged. To reach another part of the town he has to run the gauntlet of many such places I have known of men going on liberty who have never got a hundred yards away from the gate and who have returned without a cent. There is now on our men-of-war a store or canteen where some articles commonly used by sailors can be bought Paper, soap, and in some cases candy and delicacies in the way of food are sold at a small advance above wholesale prices This store resembles somewhat the canteen at army posts, but the stock is more limited and should be much increased In foreign navies, particularly the English and German, the canteens offer a large variety of articles of food, and in the German navy malt liquors are freely sold

I think that the store on our naval vessels should be conducted on as liberal rules, and I believe that articles of food, soft drinks and malt liquors should be kept for sale Beer should be sold under suitable regulations as to hours of sale and the quantity that each person can buy A glass of beer at dinner and supper and at night when the day's work is over could be allowed with advantage The firemen, electricians and others coming off an arduous watch might be allowed the same privilege I remember that on the cruise of the Oregon around from San Francisco, Captain Clark every day at his own expense furnished the firemen coming off the afternoon watch with a drink of spirits It encouraged the men, did good and I was very glad that I could recommend it as a beneficial measure On long voyages which now rarely occur, the lack of space might not permit much beer to be carried but in port, where supplies can be obtained daily, there would be no trouble on this score. In every navy yard there should be a club-house where men could go for an hour or two, play billiards, cards, or other games, and have their beer and tobacco The profits of the club, which can not be large, for everything should be sold at a small advance above cost, can well be devoted to pay for music and other entertainments Clubs have become a necessity for those who live on land and are certainly equally desirable for those living on a ship, where the average man has scarcely room to sit down and write a letter or play a game of checkers, and where he has to be in bed at nine

In foreign navies at all their naval stations at home and abroad such club-houses are generally found and serve a very useful purpose

I was convinced of the need of such a club-house during a recent tour of duty at Cavite There are always several ships in port and sailors varying in number from six or eight hundred to two or three thousand When men come ashore on leave there were but two respectable places open to them, the post exchange of the marine corps and the Young Men's Christian Association, both excellent institutions, but limited in capacity and of course, furnishing only soft drinks There were saloons in abundance so located that the sailor could hardly pass them by without being tempted to enter, and when a man was ashore for a few hours there was really no other place for him to go If Cavite had been an English or German naval station, instead of an American, there would have been a canteen where a man could have got his glass of beer at about one-half the price charged in the saloons, and under much better surroundings

I believe that the evils from drinking can be materially lessened by improving the character of the public places where liquor is sold I know that it is the belief of many of our people that a place where liquor is sold is necessarily bad and should be abolished I can not agree with this belief and I think the beer gardens and similar resorts which every year are becoming more common in our larger towns are a benefit to a very large class. For the dwellers in the narrow quarters of a crowded tenement house or flat it is a great boon to have a cool, brightly lighted garden or hall with music where a family can pass the evening at no greater cost than the price of a few glasses of beer These resorts have been introduced by our fellow-countrymen of German origin In their native country these gardens are universal and I think no one can regard the Germans as an intemperate people or one whose manhood and intelligence has been sapped by the use of liquor

While these resorts have their evil side, it is small in comparison with that inseparably connected with the low groggery which is so common in our larger towns The larger the saloon the better conducted it will be The owner will have too much at stake to permit disorderly conduct, and will not allow it to become the resort of thieves and pimps He can, also, supply a better quality of drink and food and can offer such attractions as music which the smaller place can not afford I believe that the number of drinking places should be very much reduced and that the character of those left would naturally be much higher

All that I have said about the benefit of a well-managed resort for the town dweller applies with still greater force in the case of the sailor There is no tenement house where the occupants are so crowded as in a battleship, and none where is so little light and air It is absolutely necessary for the mental and physical health of the sailor that he have an opportunity for recreation

which he can not get on a ship and which are not supplied to him by the existing sailors' homes, excellent as they are

In conclusion I would say that in our Navy, after a trial of prohibition for over forty years, we still have a personnel which very generally uses stimulants In spite of the persistent efforts of sincere workers the number of total abstainers is comparatively small, the general sentiment in favor of temperance is very lukewarm, and the feeling toward intemperance is indulgent. And judging from the medical reports alcoholism is much more prevalent in our Navy where prohibtion is the law than it is in foreign services where the milder stimulants are permitted

THE ARMY CANTEEN AS A MEANS OF REDUCING INTEMPERANCE *

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Nearly everything which has been published on the subject of the army canteen has been written by strong opponents or advocates The inevitable consequence of such partisan discussion is that people who have little knowledge of the matter and less interest in it have not had access to any judicial summing up of the good and evil, so that their judgment has been biased by the tenor of the particular literature which has fallen into their hands What is far worse, the subject has become a political one, so that it is now practically impossible to discuss it without being suspected of partisanship, bias or worse

Having been an advocate of the canteen for twenty years, I, therefore, must necessarily condemn my own paper in advance, for I can not ignore my long experience, and must remain a partisan I can nevertheless bespeak a respectful hearing from opponents by stating that there is a common ground on which we all can stand —and that is the one undoubted fact that the beer feature of the canteen is an evil thing No army officer desires to be a beer seller, and yet he must be if he managed the old canteen It is doubly repugnant to all of us to see the government engaged in this traffic

In addition to this, we all know that drunkenness is an evil which has affected mankind for many ages, and its harm, though yearly diminishing, is yet so stupendous that every sensible person wishes it entirely eliminated Army officers are human, after all, possessed of the ordinary attributes of human beings, and are as vitally interested in the elimination of drunkenness as every other class of good citizens A few opponents of the canteen have very unwisely accused army officers of desiring to increase drunkenness—an inhuman charge which is difficult to explain On this common ground we stand unfortunately, back to back, looking in different directions If we could only induce ourselves to turn around and look at the scene on which the other side had riveted its eyes perhaps we might come to a fair agreement Every shield has two sides, as the fabled knights found to their sorrow

In the first place, there is one popular misconception which stands greatly in the way of mutual understanding and that is the prevalent idea that a soldier is necessarily an immoderate drinker—a being different from the usual run of humanity and requiring extraordinary restraints and safeguards This idea is an inheritance from the time when every man, in or out of the Army, drank to excess—a time when even the clergy considered it improper for a gentleman to go to bed sober The civilian population has been so engrossed with the remarkable change in its own drinking habits that it has failed to note that the Army, being yearly recruited from civilians, has undergone the same change It is no doubt true that a large proportion of civilian young men still drink alcoholic beverages, yet the proportion of abstainers is gradually increasing decade to decade as the result of the necessities of civilization There are now many kinds of labor which can not be performed except by abstainers with clear heads never befuddled with liquor By the ordinary laws of natural selection the drinkers are being weeded out, and in time the race must be very largely temperate or perhaps abstainers Otherwise our complex civilization could not continue Lives are in jeopardy many times every day, and should an engineer, pilot or motorman be drunk or even slightly influenced by liquor, we might be destroyed Consequently populations are becoming more sober every generation One has only to read the accounts of the drinking of past ages and even of a century ago to be convinced of the remarkable advance we have made I have scant sympathy for those "muck-rakers" who see only the remaining drunkenness and can not realize the present rapid evolution toward universal temperance, with its marked number of abstainers

Now these laws are operative in the Army too Perhaps as large a number of soldiers drink alcoholic liquors moderately as among the same class in civil life, though I sometimes doubt even that The number of abstainers is surely as high, and the number who never do get drunk is very gratifying Soldiers are normal average men in perfect health few being neurotics, and there is then no nervous basis for drunkenness It can safely be asserted that inebriety is a result of some peculiar condition of the nervous system It is a symptom of a disease and not a mere habit It shows itself before 30 years of age and generally before 20 Drunkards always present other evidences of nervous defects or even disease It stands to reason, then, that there should be less tendency in the Army that out of it—and that is a fact I defy any one present to show me a mixed body of 1,000 laboring men and mechanics in any part of this country who show less drunkenness than in 1,000 soldiers of our Army All statements to the effect that soldiers are more drunken than civilians are products of an uninformed imagination

In the next place soldiering is quickly joining the ranks of those professions which demand sobriety There are a host of reasons why the Japanese defeated the Russians Among them is one which has not escaped serious attention from the civilized world—and that one is the drunkenness of the Russian and the sobriety of the Jap For a long time now we have adopted the plan of getting rid of the young soldier who shows a tendency toward excessive drinking He generally eliminates himself, to be sure by court-martial, for offences growing out of drinking, but the officers now show a gratifying desire to eliminate the drunkard whether he commits himself in other ways or not As a pure matter of selection, then, the Army is more sober than the civilian population from which it is drawn It is high time that we resent the accusations so recklessly made by those who do not know the facts They forget that one

* Read in the Section on Hygiene and Sanitary Science at the Fifty seventh Annual Session of the American Medical Association Boston 1906

drunken soldier in uniform creates more comment than ten civilians guzzling in a near-by saloon, and it is very human to believe that every one in uniform acts the same As for the officers, it has long been the will of the people that an officer found drunk on duty shall be dismissed as too dangerous to be trusted with great responsibility But we have gone a step further, for we have recognized that an officer is really on duty at all times, in that he is liable to be called on in an emergency at any hour of the day or night It would be dreadful if any of a defending party in a fort were drunk at the critical time Consequently, officers who occasionally get drunk are not as fit for the services as the abstainers The heavy drinkers may occasionally be men of tremendous ability, and, no matter how much we may have depended on them fifty years ago, we are learning that in the long run sobriety counts

Finally, we are finding that many years of drinking bring on the inevitable dementia in which the victim acts like a mere automaton who can not be depended on, because his brain cells have atrophied The policy now growing up is the fruit of a very bitter experience with these degenerates They ruin discipline, destroy regiments and create anarchy when the strongest government is needed Their moral sense has been destroyed, of course, so that they are unable to see the gravity of the misconduct of others Grave crimes are not only excused, but honorable effort to improve matters are bitterly resented to the point of preferring false charges, denying facts and abusing their authority Such regiments have a low moral tone which sometimes sticks to them for many years, causes the best men to avoid service with it, and leads its officers to do things which show they have been morally injured Drunkards thus set a low standard, so that it can be accepted as a fact that in regiments long under the command of inebriates the decent element is suppressed and the very worst cluster around the drunken colonel The better people of the surrounding civil community withdraw from intercourse, and the young officer, fresh from home, finds himself thrust into a lower social layer to his own injury In addition, the example of the authorities over him not only teaches him deplorable habits, but gives him the impression that dishonorable and degrading conduct is expected of an officer and gentleman Young officers trained in such an environment can not avoid some injury, and a few of them become too dangerous to be trusted with future responsibilities requiring a high standard of morality and honor

As a matter of public necessity and military efficiency, then, the drunkards must be eliminated They are dead wood, often retained because of past services of inestimable value to the nation, but, as a rule, they are quietly shelved as in civil life, on account of their lost moral sense The nation is waking up to the fact that when it employs men to do brain work they must possess the brains to work with, and that when the brain atrophies the officer is demented In one case of this kind I have seen the medical officer's diagnosis impudently denied by some ignorant laymen who wished the dement to be retained in service for their own selfish ends, but the general policy is to rid the Army of all the victims of alcohol and also eject the men who think that drunkards are desirable in command of Army posts

These are the facts which show that the best officers are vitally interested in the reduction or total elimination of alcoholism It is strange that any one in his senses should accuse them of the inhuman desire to increase drunkenness, and yet men, otherwise possessed of sense, do make the assertion We will later discuss the great problem as to whether moderate drinking is harmless Doctors, scientists, clergymen and laymen are all divided in opinion and each side has much data on which to base a good conclusion We must first give attention to a topic on which all agree, and that is the one great fact that drunkenness must be eliminated from civilization in the quickest and easiest way

In the solution of this great problem there is an unhappy division of opinion as to the means to be employed, and it is much to be feared that the views now held can not be reconciled The workers for temperance divide naturally into two great classes—the idealists, who wish to accomplish the reform at once and who will not compromise with vice, and the practical reformers, who think that the desired end can be obtained by slow degrees only and that we must be content with small gains each generation in the manner which Nature devises in all her great works Both sets of temperance workers are necessary, the one fixes an ideal toward which the others must direct their energies The practical men point out the respective steps leading to the ideal Each school is necessary to the other The unaided idealists always fail, for their measures are impractical, and the others fail unless they have behind them the firm public opinion aroused by the idealists Temperance workers outside of the Army are mostly interested in the ideal and have no concern with the practical affairs of police duties Those in the Army have a sacred trust confided to them by the people—the welfare of the soldier individually and collectively Whether we like it or not, we are forced by our daily work to join the ranks of those who are trying to minimize that which can not be eliminated for many generations We would like to put an end to drunkenness among soldiers at once, but we can not, we have hit on a plan of diminishing it, and our opinions at least deserve a hearing It is not a theory, but a very real condition which confronts us in the Army, and a sad one at that Men are not perfect and never will be The ideal in armies can never be obtained, but we must strive after it I am wholly convinced that the Army owes all its advance to the crusade of the great temperance idealists, but it would have accomplished nothing without practical measures so let us not stand back to back, but hand in hand and look at the following facts and work together

Immediately outside of Army posts are collections of small houses and shanties used as saloons and worse The proprietors lure young soldiers into these dens and exert all their arts to sell whisky It is a money-making business no matter what damage is done It was such a blot on our civilization that many years ago steps were taken to provide means of weaning the soldiers from their tempters It is found as a matter of experience that reading and amusement rooms do not attract them At one post I have in mind there is the finest kind of a gymnasium and yet scarcely 5 per cent of the soldiers enter it voluntarily They all dislike reading as much as laborers everywhere They do like to sit at a table with a little beer and growl over their hardships I do not know what man would do if he did not have opportunities to complain now and then of his hard luck

In view of the difference of opinion as to the harmfulness of this matter our opponents should be generous enough to concede the point, but I will meet them more than half way and say that it is harmful to place beer where young men can get it easily What we contend is

this, the canteen system drove out a far greater evil—the low dives around Army posts It made a remarkable reduction in drunkenness after 1890, when the system became established, as shown in the table of admissions to sick report for alcoholism The statistics are backed up by reports from every source, certifying to the great reduction of cases of alcoholism admitted to sick report [1] Add to this the consequent reduction of the number of courts-martial, of cases of venereal disease and the general increase of morality, we have proved conclusively that the beer feature of the canteen was an instrument for the reduction of drunkenness

Now, what is the objection which overwhelmed this practical temperance reform and caused us to revert to the old conditions? Under the persuasion of the W C T U, Congress was induced to forbid the sale of beer and wine in the canteen, the old rum shops sprang up like mushrooms, drunkenness immediately increased and there is no way we can combat the present evil It is useless to supply reading rooms to men who won't read —we have tried it We have tried amusement rooms and gymnasia, too The saloon is an attraction we can not overcome

The chief objection was, of course, the ethical one, that beer should not be sold on government reservations, but is that a sufficient reason for increasing the drunkenness outside the gate?

Principles are all right to live up to, but must be modified as soon as we find that they do evil In no way we look at the matter is it justifiable to continue the old objection—laudable though it may seem to a superficial view

The beer feature of the canteen might be described as fighting the devil with fire—a good doctrine, by the way, in the minds of many, if not most, devout Christians Nevertheless, it can be denied that it is fighting with fire, for, though we acknowledge that it was a minor evil replacing a greater one, there are many honest men who do not see evil in it at all except as below mentioned

When the canteens were in full blast we were frequently regaled in the daily press, with accounts of debauchery It should not be necessary to deny this After pay-day, it is a pretty noisy place, but young men are not happy unless they are making a noise Occasionally a man will take too much—a matter which we try to prevent It would be wrong to conceal this fact, for this is an honest effort to present the evil as well as the good

Now let us ask ourselves, if there is any danger in the small amounts of beer and wine usually consumed by the average man Literature is crowded with descriptions of experiments in which large quantities of alcohol are used The evidence of course, is all on one side Yet there is astonishingly little as to the effects of minute quantities and opinions as before stated are at wide variance There is indeed a growing mass of evidence, that all carbohydrates are first oxidized into alcohol before any cell—animal or vegetable—can utilize them as foods for energy That is, the main energy food of the living world is alcohol manufactured by the enzymes produced by the cells themselves The long discussion as to whether or not alcohol is a food is settled, though it will not be acknowleged as settled for another fifty years Of course, we must allow nature to produce alcohol in our bodies in her own way So we stand on very firm ground in the opinion that the alcohol introduced into the stomach is an unnatural way of taking it into the cells, and can safely be omitted That is far different from saying that it is a harmful way in moderation Indeed, the use of a small amount may actually relieve the tissues of the work of preparing it and may tend to survival This is the manner in which we became dependent on starch in the place of cellulose Likewise we once used raw starch, but the weaklings who used cooked starch had the advantage and survived in greater numbers, so that we are dependent on it now Likewise we are undergoing a still further evolution Starches are manufactured into sugar in our bodies, so that if we eat a little sugar we save the organism that much trouble There is a natural selection of types able to do this, and the natural result is that mankind is already partly dependent on sugar manufactured outside our bodies Human evolution is going on all the time—it is not ended, as a few men assert A tremendous selection is now going on in many directions It is quite possible that future man may be dependent on both sugar and alcohol in moderation This, too, is far from saying that we are dependent on them now or ever will need large amounts to the total exclusion of cooked starch

The use of beer in the canteen can not then be attacked on the scientific plea that it is harmful or useless We must attack it on ethical grounds It is acknowledged that it is bad ethics to allow a young person to use alcohol At present we must keep it from them until full maturity if we can Young soldiers are the very ones we would like to guard if we could, and if we can not do so absolutely, we must be allowed to do the best we can We must protect them from the grog shops around Army posts and the canteen has proved itself able to do this with a minimum of harm It is, therefore, good ethics

In addition to all this, the profits from the sale of beer belong to the soldier himself, instead of the saloonkeeper They are used to improve his table fare It is currently believed that the ration is sufficient, and so it is in a sense, but it is very plain, simple and unvaried The soldier, like every other human being, needs an occasional change, a little feast now and then He hungers for it, and spends a great deal of his pay for extra food in every army in the world Restaurants or sutler's stores are a necessary adjunct to armies and follow them even into battle They sell some harmful things, and it is our desire to reduce this harm by increasing the attractiveness of the table There is a growing opinion that the company should have a few cents daily per man for this one purpose of buying extras whenever possible, depending on the commissary for the staples We could do this fairly well when we had large canteen profits and big gardens, but now we can not We keenly feel the deprivation The breaking-up of the canteen has actually interfered with feeding the soldier, and has caused him unnecessary expense For those who are not acquainted with this matter, I may explain that the canteen is a co-operative store, whose profits are divided up among the companies and spent for the soldiers' food and amusement It is always managed by an officer in their interests

The sooner it is restored the better, and it is hoped that our opponents who are engaged like ourselves in the crusade for temperance, will join us in re-establishing this practical instrument for good It is a step toward temperance I do not quote authorities or reports because they are practically all of one tenor, that the abolition of the beer feature of the canteen was a disaster The opponents are the rare exceptions Surely the pub-

1 Dr Geo. W Kober American Medicine Dec. 5 1903 and reports of the Surgeon General and Secretary of War

he should credit these experts with unbiased knowledge of the facts at first hand It is a notorious fact that the establishment of the canteen was violently opposed by very many officers, but as soon as it proved its usefulness, the opposition disappeared Surely such men should not be accused of ignorance of the matter, and least of all, of viciousness I am quite sure that every one who investigates the matter impartially will advocate the old system which proved to be so efficient and which is now desired by practically all officers, by both the abstainers and those who use alcohol themselves

MEDICAL CARE OF INEBRIATES *

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Inebriates rarely ever appeal to physicians for help, unless intoxicated, or in the remorseful period, when recovering from the toxic effects The moderate drinker never considers the need of medical help The periodic drinker may seek advice on the eve of an outbreak, but never after, until the storm is over, and he is suffering from the effects of the excess

The friends of patients frequently ask physicians about these conditions, and sometimes bring the patient with them, who is always skeptical of the need of help As a rule, physicians look on inebriety as a moral condition of half vice, with mental indolence and feeble will.

The first impression is to alarm the patient and to try to impress on him a fear and horror of his condition, and in this way to rouse up an antagonism to the drink impulse, or the quack method may be tried, of drugging the liquor, causing it to produce nausea and mental disgust for its taste and effects

The quack depends on chemical restraint and the unpleasant effects from the use of spirits either by being drugged or by medicines taken immediately before or after its use, sustaining the statements that spirits are poisonous and dangerous

There is a form of suggestion by which new thought is impressed on the mind so powerfully as to overcome the morbid impulse for drink in the future While this is possible in a certain number of cases, it depends on so many complex conditions that its reality is very uncertain

The patient who is impressed with the statement that alcohol is poisonous and can not be taken in the future without most revulsive effects discovers that this is a delusion, and his skepticism of relief increases, hence the last state is worse than the first

One fact should always be considered that the drink craze or symptom dies out from some unknown constitutional change in the organism, but when this will occur is unknown A great many instances of reported cures from drugs or mental and moral means are simply constitutional changes, and in no way connected with the use of these means

The treatment given in institutions or in private practice should have this one object prominent, namely, to remove the exciting causes and restore the nutrition and integrity of the organism, and in this way to promote a tendency toward a constitutional change in which the drink craze disappears

As an office patient the inebriate should be given very exact instructions concerning the use of drugs and his conduct and surroundings If the case is a periodic, great attention should be paid to the premonitory symptoms, and apomorphia should be given with circumspection and exactness as to time and place Where the nutrition is greatly disturbed, phosphate of sodium combined with daily baths has a particularly valuable effect

States of poisoning and starvation should always be recognized and considered in the treatment Poisons introduced from without and poisons formed within are present in all cases Low resisting pain-centers with defective nutrition, causing starvation and feeble organic activities, are also present universally The heart is defective in action and the circulation of the blood is impaired in rhythm and uniformity As a result there are almost innumerable signs of functional disturbances and vasomotor palsies, defective co-ordination, with faulty judgment and lowered conceptions of right and wrong

Evidently, from this, moral treatment can have little or no effect Each case presents a problem for itself A certain proportion of all inebriates, particularly in the early stages, can be treated at home successfully, but each one should be made the subject of frequent visits, study and examination Psychic treatment is of equal value with the physical Exact duties and obligations should be put on the patient every day, and the mind should never be allowed to consider these measures of small interest The more chronic cases should go under hospital care, where the surroundings with enforced brain and nerve rest could be made exact and continuous for a time

The inebriate does not need diversion or change like the neurasthenic, he requires nerve rest, removal of all exciting causes and eliminative measures to correct the waste of the body The subsidence of the drink craze is not the cure, but only a small beginning

Most radical changes in the nutrition of conditions provoking brain strain and tension are essential The removal of the exciting causes followed by nerve rest will enable the system to restore exhausted nerve centers and improve the metabolism of digestion It is from steady, persistent effort to give brain and cell rest that the exhaustive conditions and psychic pain which calls for relief and finds it in alcohol and drugs can be removed The alcoholic impulse is a sign of central nerve exhaustion and derangement and irritability of the pain centers and an unconscious call for help

There is no doubt, in all persons who have used alcohol, a nerve tension and degree of irritation which can only be concealed or covered up by spirits and drugs It would be apparent from this that the means of treatment must embrace a very wide range of measures that will restore the lost balance of the organism Very interesting questions occur in every case as to the best means of giving relief and neutralizing the toxic states The psychic treatment alone covers a very wide field, including climate, occupation, excitement, nerve rest and exhaustion

In the physical treatment, a still wider range of means and measures suggest themselves, particularly of means to remove the exciting causes and to determine how far the brain has become deranged and the organism perverted below the health limits

Removal of the poisons is another therapeutic measure that requires a great variety of appliances, particularly baths and measures to stimulate the elimination Perhaps no remedies have a wider application in the treatment of inebriety than baths vibration and massage

* Read in the Section on Hygiene and Sanitary Science at the Fifty-seventh Annual Session of the American Medical Association Boston 1906.

In my experience the radiant light bath is the most powerful eliminative and restorer of the circulation of the blood to the surface The vasomotor paralysis so common in all these cases is more thoroughly antagonized by electric light applied to the surface than by any other means known To relieve brain tension and reduce states of excitement, atropia, combined with strychnin or lupulin, is an equally valuable combination for a large number of these cases Bitter tonics have a great power in many cases of overcoming the derangement of nerve centers and neutralizing its functional explosions of energy

The drink paroxysms are often prevented by these bitter tonics of which large doses of the infusion of quassia is the most valuable The question of using these drugs with the needle is often a very serious one and involves the consideration of a great many conditions

Questions of occupation and surroundings are equally important and essential in the treatment As a rule, most patients should begin the treatment at home, under the care of the family physician, and if this does not produce good results it should be followed by institutional treatment, and when this terminates he may go back to the family physician and home treatment

The inebriate is not curable by institutional treatment alone, he should be under medical care for a very long period, not to take drugs continuously, but to have the advice and counsel of the family physician

He is practically in a more serious condition than the syphilitic States of poisoning and exhaustion may occur at any time, unknown to him, that will again bring on the drink impulse, and unless he is in touch with his family physician escape is difficult No physician should ever minimize the gravity of the condition of an inebriate, but should make him understand the serious disability and degeneration from this source He is to be regarded not always as a chronic drinker, dying from delirium tremens, or premature old age, but as one who is constantly destroying his vitality and weakening the resisting powers of Nature, inviting pneumonia, or acute inflammatory diseases of any kind, and furnishing a favorable soil for the development and growth of germ diseases He should be made to realize that the ordinary strains and drains of life and the shocks and traumatisms are made more fatal, and that he is feebler and has lower vitality than the normal man

There is very little danger of the physician becoming an alarmist and giving an extravagant prognosis of the danger in persons who have used alcohol to intoxication and who are practically inebriates On the other hand, a pessimistic view of the incurability of such persons is not warranted Clinical experience and rational study both in institutions and in private practice indicate the curability of inebriety and the degree of the permanency is proportional to the accuracy of the study and the application of exact means The great fault of the present is that the rational therapeutics of means and measures of treatment are in a very infantile stage. The moral treatment and the quack treatment predominate everything, and the rationalist, who would study and apply exact measures, is not looked on with favor As office patients the inebriates are regarded with disgust by the physician The seriousness of the inebriate's condition is unrecognized, as when suffering from coma and delirium, the physician treats him as responsible for this condition and deserving of suffering, which might possibly restrain him in the future, and when delirious and delusional on the street he is considered the proper subject for the policeman His credulity in accepting the statements of quacks and attempting through their extravagant claims to escape still further increases the disgust of the physician, and yet in all this there is a field of practice which should be occupied by the regular profession everywhere

Inebriety is a modern disease in one sense, and in another it is a very old one, but the conditions which it presents in our modern life demand study and treatment as much as typhoid fever or any other well-marked disease There is no theory about the degeneration of an inebriate, there should be no sentiment in his medical study and care The same causes and the same effects exist here as elsewhere We have now come to a point in medical history when the phenomena of brain and nerve disorder can be studied and measured with comparative exactness and it is our duty to recognize its physical character and study it, not as a theory, but as a condition, which will give way to the proper means and measures Preventive medicine in this direction is destined to occupy a very large place in medical history

[THIS SYMPOSIUM ON ALCOHOL, BEGUN TWO WEEKS AGO, WILL BE CONTINUED NEXT WEEK]

SOME PROFESSIONAL REMINISCENCES *

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Every one who travels even an ordinary road has experiences of his own If he can apply them to the good of any of his fellow-creatures he is serving in a very general way the common interests of humanity There is always something, if he only turns his head in the right direction, that he may see in a new light

At certain times we react more sharply to the controlling circumstances of environment than ordinarily It is the question of the man, the gun, the aim and the game being in proper line Too often, alas! we not only miss the mark, but get kicked by the recoil Thus the physician, by virtue of his judicial office, soon learns not only to think before he speaks, but oftentimes not to say what he thinks His face must never be the mirror of his soul. To manifest surprise at any unexpected change in the illness of a patient is to confess ignorance Even death itself must always be viewed in the light of any other accident To the one seeking advice it is always a comfort to know that his physician has well grounded and positive opinions In fact, he can the better trust him when he is sure that his faithful adviser is never wrong If it were otherwise, there would be no need for doctors Filled with such heretical thoughts, I am tempted to relate some personal experiences substantiating them

After finishing my hospital internesship and imagining that I was well prepared for the practice of the noble art, I was summoned to a sick child in a tenement The little one was lying in a cradle, playing quite unconcernedly with a rag doll "Not very sick," I thought, "but what can be the matter with her?" I certainly had never seen the like symptoms before There was a general spotted eruption over the face and other exposed places, a rasping cough, bleared, lachrymose eyes and a profuse coryza Not smallpox, I was sure, nor its reputed relation, as I had seen much of both

"An ex-house surgeon of New York Hospital must not be worsted by such a case as this There is one

* Read before the Charaka Club N Y

thing," said I to myself, "she is not going to die in any event" Just then the grandmother of the child came from a washtub in an adjoining corner of the room and seriously added to my embarrassment by squarely, and rather disrespectfully, I thought, plumping out the question "Docther, what is the mather with the choild?"

For self-protection I gathered my consciousness within myself, dropped my countenance curtain, and manifested a duly abstracted air, and unconcerned manner, while I took out my prescription book and pretended to be writing I found it very convenient at that time not to hear her question Still she stood there defiantly, with arms akimbo, with smell of suds and look of scorn, and repeated her patronizingly insistent demand No washerwoman had ever dared do so before

It was nevertheless trimming to a cross sea with set sails and a gathering storm After all, she was only repeating my query There was one other in that room that looked for the answer more eagerly than she could imagine To gain time he took refuge in dazed and abstracted thought, adjusted his stethoscope and mutely motioned the clamorous interloper to be silent

The bared chest showed more spots The patient cried in fear, and due time was consumed in quieting her The responsibility of the situation became more and more oppressive The sonorous grunts of my critic overwhelmed any possibly abnormal auscultatory signs The only urgent thing was the diagnosis The last resource was in subterfuge and hypocrisy, anything but a humiliating acknowledgment of ignorance

Again "Docther, why don't you tell me what is the mather with the choild?"

"O yes," said I, "the fact is you would not understand it if I gave the name for the disease. The Latin term is *conjunctivitis,* and, of course, that would mean nothing to you"

Her supercilious and incredulous smile I shall never forget Her rejoinder was electric A new light dispelled the fog "And is that the Latin name for *measles?*" said she

I could have hugged the woman, suds and all, but my studied professional reserve came to my relief "No, not the name for the *measles,* but I thought you wanted to know what ailed her eyes" Still the old woman unconsciously saved me from utter defeat and gave me my first clinical demonstration of the disease Since then it has always been my religious duty to treat the grandmother in the sick room with becoming consideration

Inasmuch as the patient is always the uncertain factor in the equation of chances in making a prognosis, it is always safe to be on the qualifying side of possible antagonistic conditions Thus we all learn never to be surprised at anything that may happen

Many years ago I was treating a young lady for typhoid fever While she was convalescing I had been absent from town for a day or two On my return by an evening train I called to see her on my way home. It was a casual visit, and anything unusual was far from my expectation On attempting to ring the door bell in a dimly-lighted street my hand grasped an ominous fold of crape I looked at the number to be sure I was at the right place "Dead! What could have happened during my absence? Possibly perforation of the bowel or internal hemorrhage I have been away and some other man has been called in the emergency In any event now is the time to say little and listen"

When admitted I went at once to the room, stood on the landing for a moment and heard various voices within "They are laying out the corpse,' thought I, "and my call will be a consolatory function"

In response to my knock the door was opened by the sister, who surprised me with a smiling welcome I walked to the center of the room and saw my patient sitting by her bed!

"Oh! doctor, we are so glad you called Josie has been longing for you for days She wishes to ask," continued her sister, "if she can eat some oysters"

As for the astonished physician, no actual surprise must be shown Oysters on ice instead of my patient!

"How many oysters will satisfy you?" was my question

"Can I have six on the half shell?"

"Yes, order eight, with crackers and lemon"

Then, taking her hand in mine and patting it encouragingly, I found myself saying "Josie, I am so glad, so glad——"

"Glad for what?" inquired she

"Glad that you like oysters, as I was afraid that you might not be able to eat them to-night" Here truth hypocritically shook hands with policy

When in the hall again the sister asked me if I had not been taken aback at finding crape on the bell, at the same time explaining that an old boarder had died in the room above The dart had simply shied a little

"Surprised? Why, no I knew it could not have been Josie Why should she die now when she is recovering?" Yet for the time being I was seemingly nearer to a corpse than I cared to be again Of course, the patient never heard of the circumstance until long afterward, and luckily for her is still able to enjoy her oysters

In my earlier journalistic experience I conceived the possibility of giving due variety to editorial functions by contributing an anonymous criticism on a paper that had been read before the New York State Medical Society at Albany The tone of the communication was as respectful and courteous as could be made by one who disputed the conclusions of the author, and asked for more light. The writer of the original article was, besides, a personal acquaintance who had an abundant ability to make a suitable reply

As no answer came for a fortnight or more, I was somewhat chagrined by imagining that I had merely fired a blank cartridge thought on a half-rock calculation This illusion, however, vanished in due time by the appearance of my opponent, who came specially from Albany to consult me on the propriety of his answering his critic. He was extremely anxious to know who had the temerity to differ with him, but in his excited state of mind I concluded that any direct statement to that effect should be a matter of subsequent and deliberate reflection In any event, he wished me to help him make his arguments as striking as possible There was indeed, a ludicrously pathetic side of the situation that appealed to me, and I did my friendly duty by making several suggestions which he accepted with extreme satisfaction and at the same time assuring him that he would effectually silence his presumptuous assailant

The reply was duly published and I took occasion to congratulate him on his victory It so happened that, his paper having received so much well-merited recognition, he was invited to elaborate it and present it to the Academy of Medicine. On that occasion a member who was always ready to discuss any subject rose and to my great surprise, used all the points of argument

contained in the anonymous attack This was enough for the author of the paper Turning to me with smiling satisfaction, he whispered "At last I've found the fellow Now watch while I wind him up"

The unconscious victim little imagined that he had short-circuited a live wire that had been charging itself for months The result was startling and overwhelming The Academy was spell-bound at the vehemence of the author's invective sarcasm, and when the excited speaker took his seat it was plain that the victory was entirely on his side The only comfort for the vanished one was complacently to blow and cool the finger that he had so foolishly put in the fire

But this was not the end of the matter For a long time afterward, whenever the volunteer critic appeared at the state meeting with a paper, he was sure to have one, at least, who would take issue with him Nor did they ever after exchange views other than at a safe and respectful distance in the debating arena The explosion of mutual antagonism had blown them so far apart that each was on the opposite side of any possible reconciliation Nobody, however, knew better than I that both were at fault for meddling with somebody else's fireworks, and so at one of the meetings, I, with an innocence I could not feel, asked my Albany friend, "Why do you always worry Dr G ?"

"Do you not remember his published criticism of my paper on fractures?" replied he

"But he did not write it," was the rejoinder

"Who then?"

"It was I"

"How absurd it was," he laughingly said, "that I should have come to you, of all others, for help under the circumstances"

"Yes! But didn't I do my best to help you silence the l man?" was the only excuse I could offer

And so in my conscience-stricken way I satisfactorily untangled a ludicrous snarl of misdirected purposes

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THE ULTIMATE RESULT OF THE ROENTGEN TREATMENT OF CARCINOMA OF THE BREAST

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A review of the literature of carcinoma of the breast during the last year reveals but little from the pens of those operators whose experience in the use of the Roentgen ray is great enough to entitle their utterances to respect and attention

On the other hand a number of articles have appeared in the various journals which, on their face, betray ignorance and inexperience The writer of one of these after relating a deplorable series of surgical mishaps arising during an attempt to operate on a breast which had been rayed by another operator, accuses this preliminary treatment of a number of unpleasant things and ends with a denial of the ability of the ray to produce any tissue changes whatever beyond a dermatitis, basing these sweeping assertions on an extended experience of 6 cases

Such articles as this, which is merely an example of a number of others to which my attention has been drawn during the year, are not entirely worthless since they serve to produce a thrill of amusement and compassion in the minds of those who have sufficient experience to enable them to judge correctly of the value or otherwise of this agent in the treatment of the condition noted, but unfortunately the widespread dissemination given such misleading statements by the various journals is liable to lead to a misapprehension on the part of the profession at large who have but little time to investigate such matters and are apt to give most attention to the loudest noise

In one such article a technic was employed for deep-seated carcinoma which was exactly suited for the treatment of lupus or superficial epithelioma and diametrically opposed to those principles enunciated repeatedly by the men who have announced certain degrees of success in the treatment of deep-seated carcinoma, primary or recurrent

In apparent ignorance of the fact that *x*-ray possesses no power of independent judgment, the author, after using a ray which is absorbed by the skin, boldly states that from his extensive experience of 6 cases, he has proven that the radiation from an excited Crookes tube produces superficial effects only and is incapable of effecting tissue changes at a depth greater than ¼ inch below the surface

I do not believe that any false modesty should be allowed to prevent the challenging and direct controversion of such palpable misstatements It has been repeatedly demonstrated that a capable apparatus in the hands of a competent operator can be made to produce radiations so penetrating that they may be absorbed and rendered effective therapeutically at any depth in the body, in fact, the skin of the back may be affected even to the production of a marked dermatitis by radiation directed toward the front of the chest, thus passing entirely through the body I do not know of any way by which those members of the profession may be taught who persistently ignore and disregard the repeated statements of those physicians who have devoted years to this work and have freely formulated and disseminated exact and explicit directions whereby any other physician of intelligence can reproduce their technic There are none so blind as those who will not see, and the only defense seems to be the exposure of the dangerous ignorance of such writers who make up for paucity of ideas with a deluge of words and who base sweeping generalities on individual observations

SUCCESS OF RADIOTHERAPY

The power of the *x*-ray to effect distinct cellular change on normal or pathologic tissue is in evidence this year as it was last, with the difference that in the hands of qualified men these effects are produced with a certainty, directness and ease which is the natural result of another year's observation and experience

At the meeting of this society one year ago, I made the strongest plea in my power for the wider adoption of anti-operative and postoperative treatment of carcinoma The ensuing year has not convinced me of the error of the position then taken but has only served to strengthen it, and to ground the conviction more firmly that in such anti-operative and postoperative treatment in conjunction with bold and skillful surgery lies the salvation of this class of patients

During the year some disappointments have appeared Two cases are to be recorded as ultimate failures inasmuch as deep-seated internal recurrence has manifested itself and will probably progress to a fatal termination. Each of those two patients, however, was suffering from recurrent inoperable carcinoma which, under the influ-

ence of the ray alone, disappeared completely giving the patient over three years of health and happiness

While it is necessary to class these cases as ultimate failures yet I think that the results obtained more than compensated both physician and patient for the trouble of taking a few painless treatments A number of other similar cases have shown no tendency to recurrence Neither of the cases which recurred was subjected to anti-operative treatments In both, postoperative radiation was begun only when the appearance of marked recurrence forced the adoption of some method of treatment whereon the surgeons announced their inability to confer any further benefit by operative procedure

If the *x*-ray is to be employed in a manner to cast credit on it as an aid in the treatment of this class of cases, anti-operative radiation must be insisted on, but if refused, postoperative radiation must be begun coincident with the beginning of recurrence at the latest, and, when the surgeon will consent, should be employed before recurrence has manifested itself, preferably the tenth day after operation In every such case the mediastinum as well as the site of operation must be rayed

In no case of primary carcinoma submitted to radiation without operation has recurrence manifested itself, but it must be remembered that in every such case the primary growth had advanced so little that the patient was unwilling to admit the necessity of operation. I am unwilling to believe that the satisfactory result in these cases was due to the absence of operative procedure but attribute it to the primary nature of the growth and the absence of metastasis at the time of the institution of Roentgen treatment

During the year repeated and renewed evidence has appeared of the actual value of the ray in producing retrograde change in carcinomatous tissue The adoption of the method of filtration founded on principles established by Roentgen and Walter applied first as a therapeutic aid and its value, proven clinically and experimentally by Pfahler of Philadelphia has resulted, in simplifying the technic and permitting the administration of much heavier doses with consequent increase in the quickness of response of the disease to the ray The experience of the past year has been thoroughly satisfactory

GROWING INTEREST IN RADIOTHERAPY

The incredulity and antagonism of certain members of the profession in spite of the misleading contradictory reports circulated by the class of observers referred to has shown a marked decrease The profession in general are manifesting a healthy interest in the possibilities of Roentgen therapy and are beginning to ask intelligent questions thereby making the opportunity for explanation and conviction It should be the duty during the next year, of every Roentgenologist to perfect himself in the technic of the treatment of carcinoma, to satisfy himself as to the exact value to be given the method as practiced by himself Extreme conservatism combined with healthy investigation and repeated observation is necessary in order that we may arrive at a true determination of the exact value of this agent in this disease

Primary carcinoma of the breast should be treated by the ray alone only when the condition or age of the patient presents a strong argument against preliminary operation The inherent fear of surgery which so many of these patients present must not be permitted to act on our sympathies or bias our judgment but the treatment of primary cases must only be undertaken for good and sufficient reasons

Free discussion of these problems with the surgeons when the Roentgenologist shows his freedom from prejudice is usually productive of good since when the surgeons become convinced of the actual value of the ray in preventing or retarding metastasis, they will insist that their operation be aided by such prophylactic measure

Bold assertions of the ability of the ray to cure carcinoma wherever situated without recourse to surgery carry not conviction but contempt to the majority of the hearers and it must be remembered that an assertion of fact and a demonstration of fact are two widely different things

While I am daily more convinced of the actual assistance which the ray is capable of affording in the treatment of carcinoma I am also more than ever certain that extreme conservatism of statement combined with practical demonstration of actual result is the best way to convince the profession of the ultimate value of radiotherapy intelligently administered as an aid to surgery, not a substitute in the treatment of carcinoma

CONCLUSIONS

1 Results are better and more permanent, the earlier treatment is instituted

2 The value of postoperative radiation has become more and more apparent

3 Mediastinal recurrence while grave is not a death warrant

4 Technic is not an accomplishment but an absolute necessity

5 No tube is too good to use for treatment

6 Filters are a necessity in the treatment of cancer of the breast

7 Treat no case that you know can be cured surgically

611 Fulton Building

MISTAKES IN THE DIAGNOSIS OF PULMONARY TUBERCULOSIS *

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The possibility of limiting tuberculosis rests on our ability either to cure those infected or to prevent the infection of others What we accomplish in both these fields depends very largely on an early diagnosis of the disease That persons having pulmonary tuberculosis frequently fail to consult a physician in an early stage of the disease and that physicians frequently fail to diagnose early cases that are presented are well-known facts How often and for how long a period patients are negligent of their symptoms and how often and for what reasons physicians actually fail to diagnose their cases are not so well understood Among English writers who have recently called attention to the mistakes tabulated in this article are

BRONCHITIS Trudeau[1] Butler[2] Miner,[3] Landis[4] Norris[5] Mohr,[6] Pryor[7]

* Read before the Rhode Island Medical Society Sept 6 1906
1 Trans Association American Physicians 1901
2. Diagnosis of Internal Medicine 1902 pp 709 and 837
3 Penna Med Jour., July 1903
4 Med News Sept. 17 1904
5 Med. News Sept. 17 1904
6 Mobile Med. and Surg Jour October 1904
7 Med Record Nov 2[5] 1905

Dr. Hodgen Medical Library
U. M. C. Medical College

GRIPPE Bonney,[8] Trudeau,[1] Koch,[9] Hatfield,[10] Norris,[5] Pryor,[7]

HEMOPTYSIS Wells[11] Barbour,[12] Whittaker,[13] von Ruck,[14] Trudeau,[1] Bonney,[8] Loomis,[1], Thompson,[16] Janeway,[17] Cattle,[18] Norris,[5] Cheney,[19] and Pryor[7]

LARYNGITIS Chappell,[20] and Harland.[21]

MALARIA Tyson,[22] von Ruck,[14] Trudeau,[1] Butler,[2] Miner,[3] Hatfield,[10] Norris,[5] and Pryor[7]

MITRAL STENOSIS Barbour,[12] Landis,[4] and Norris.[5]

PNEUMONIA Bergtold,[23] Janeway,[24] and Norris[5]

The statistical material which forms the basis of this article was derived from the histories of 200 consecutive cases of pulmonary tuberculosis admitted to the State Sanatorium for Consumptives during the past year The histories of 27 were excluded because for various reasons the patients' statements were considered unreliable Eight other histories were excluded because they were incomplete, leaving 165 histories available. Of these 165 cases, tubercle bacilli were present in the sputum in 146 Of 19 cases in which the bacilli were not found, ten reacted to tuberculin, and in the remaining nine the physical signs were held to be sufficient for diagnosis without the tuberculin test. The following questions were asked

1 When did you have your first lung symptom?

2. When did you first visit a physician?

3 When did you have your first hemorrhage, if any?

4 Were your lungs examined, and when?

5 Was your sputum examined, and when?

6 What diagnosis was given you at this first visit?

7 When did the physician inform you that you had consumption or tuberculosis?

8 When did you commence to have frequent expectoration?

The dates recorded were the year and calendar month and the evidence was carefully sifted to make sure that tuberculosis existed at the first visit to the physician, and the physicians were in all cases given the full benefit of any doubt in the matter of dates In all diseases part of the responsibility of an early diagnosis is borne by the patient, but in pulmonary tuberculosis this responsibility is particularly heavy Unless patients go to the physician early they can not receive an early diagnosis

TABLE 1.

Delay of the Patient Period Elapsed from the First Symptom to First Consultation of Physician
Of 165 cases there was delay in 84 cases or 50 9 per cent
Period of delay was

2 to 6 months in 60 cases or 71 4 per cent	
6 to 12 months in 7 cases or 8 3 per cent.	
Over 12 months in 17 cases or 20 2 per cent.	
The longest delay was	72 months
The shortest delay was	1 month
The average delay was	7 9 months

These figures emphasize the need of an organized method of informing all the people of the symptoms of early tuberculosis, the methods of preventing infection and of the insidious advance of tuberculous disease in apparently healthy people It is doubtful whether this work will ever be well done unless it can be made a part of the instruction in hygiene in the public schools I turn now from mistakes of patients to mistakes of physicians

TABLE 2

Cases diagnosed throat trouble.
Of 165 cases this mistake occurred in 4 or 2 4 per cent
Resulting delay in correct diagnosis was

2 to 6 months in	1 case.
6 to 12 months in	1 case
Over 12 months in	2 cases.
The longest delay was	24 months.
The shortest delay was	3 months.
The average delay was	11 5 months.

In two cases the uvulas were amputated, and in one case the tonsils were excised after the onset of continuous lung symptoms In these three cases last named, the cough was evidently supposed to be the result of pharyngeal irritation

TABLE 3

Cases diagnosed malaria
Of 165 cases this mistake occurred in 5 or 3 per cent
Resulting delay in correct diagnosis was

2 to 6 months in	3 cases.
6 to 12 months in	1 case.
Over 12 months in	1 case
The longest delay was	18 months.
The shortest delay was	3 months
The average delay was	7 months

No blood examinations had been made in these cases

TABLE 4

Showing Frequency of Chills and Sweats Previous to Admission
Of 165 cases the patients in

22, or 13 3 per cent.	had sweats alone.
11, or 6 6 per cent.	had chills alone
69 or 41 8 per cent.,	had both chills and sweats
62, or 37 per cent.,	had neither chills nor sweats.

Of 165 cases, 35 (21 2 per cent.) patients claimed to have had malaria previous to the onset of tuberculosis The great majority of these attacks were probably tuberculous, but the cases in Table 3 were the only ones that had been diagnosed malaria by a physician after the onset of continuous lung symptoms Chills, fever and sweats occasionally occur in tuberculosis with sufficient regularity to suggest malaria, and so long as malaria is diagnosed without blood examinations it seems inevitable that some cases of tuberculosis will be called malaria, the number of these mistakes varying in different localities, their frequency depending largely on the prevalence of true malaria

TABLE 5

Failure of Diagnosis. Lungs not Examined.
Of 66 cases this mistake occurred in 8 or 12.1 per cent
The delay in correct diagnosis was

2 to 6 months in	7 cases
6 to 12 months in	0 cases
Over 12 months in	1 case
The longest delay was	20 months
The shortest delay was	2 months
The average delay was	5.1 months

The above table is probably made up largely of cases in which the physician was deceived by the healthy appearance of the patient.

TABLE 6.

Lungs Examined and Pronounced Sound
Of 165 cases this mistake occurred in 30 or 18 1 per cent
Resulting delay in correct diagnosis was

2 to 6 months in	13 cases
6 to 12 months in	7 cases
Over 12 months in	10 cases.
The longest delay was	96 months.
The shortest delay was	2 months.
The average delay was	9 3 months.

In twelve of these thirty cases there was a history of consumption in the family Careful histories are scarcely second in diagnostic importance to careful physical examinations Those who have had relatives die of consumption often furnish the best opportunity for early diagnosis, as they are suspicious of their symptoms and come to the physician early A small lesion in so large an organ as the lung can readily be missed by the most expert examiner, especially if such lesion be deeply seated In 5 per cent of all patients admitted to the sanatorium, tuberculosis could not be positively demonstrated by physical examination alone. In 1 patient

8 Boston Med and Surg Jour Sept. 16, 1897
9 Trans. British Congress on Tuberculosis, iii p 94
10 Med. News, Sept. 17 1904.
11 Medical News Sept. 21, 1895
12. Med Record, 1896 pp 829-833
13. Trans. Association of American Physicians, 1897
14 Virginia Medical Monthly July 23 1897
15 Med. Record May 21 1898
16 Lancet, London Jan 24 1903
17 Med Record, April 25 1903.
18. The Practitioner London, February 1904
19 Am Medicine, Oct. 22 1904
20 THE JOURNAL A. M. A. Feb 21 1903
21 Am Medicine June 25 1904
22. Practice of Medicine 1896 p 66.
23 Am Medicine June 22 1901.
24 Trans British Congress on Tuberculosis iii p 213

who has lung symptoms, with or without physical signs, no physician, however skilful, is warranted in stating that the lungs are free from tuberculosis, unless the patient fails to react to tuberculin

TABLE 7

Cases with Expectoration at the Time of First Consulting the Physician in which there was a Failure in Diagnosis Accompanied by a Failure to Examine the Sputum.

Of 165 cases this mistake occurred in 31 or 18 7 per cent
The delay in correct diagnosis was

2 to 6 months in	18 cases.
6 to 12 months in	7 cases.
Over 12 months in	6 cases.
The longest delay was	96 months.
The shortest delay was	2 months.
The average delay was	10 3 months.

If sputum examinations were made as a routine in all patients whose sputum could be obtained, many unsuspected cases of tuberculosis would doubtless be discovered

TABLE 8

Cases Diagnosed Grippe.

Of 165 cases this mistake occurred in 24 or 14 5 per cent
Resulting delay in correct diagnosis was

2 to 6 months in	14 cases.
6 to 12 months in	5 cases
Over 12 months in	5 cases.
The longest delay was	120 months
The shortest delay was	2 months
The average delay was	10 8 months

Of all cases, the patients in 25 per cent had had grippe previous to the onset of tuberculosis The physicians were credited with a mistake only in those cases in which they had diagnosed grippe after the onset of continuous lung symptoms Tubercle bacilli were found in the sputum of all these cases The possibility that some of these patients may really have had grippe in addition to tuberculosis at the time of visiting the physician is remote Such a question is not likely to be raised by one accustomed to take tuberculous histories

If it were better understood that patients with early tuberculosis in apparent good health are subject to febrile attacks closely simulating grippe or bronchitis many cases of tuberculosis masquerading as grippe would be detected by the history alone Many more cases would doubtless be detected if sputum examinations were made whenever possible in supposedly grippe cases It is characteristic of grippe to occur in epidemics and isolated cases should be viewed with suspicion Finally, the tuberculin test must be appealed to in doubtful cases

TABLE 9

Cases Diagnosed Bronchitis.

Of 165 cases this mistake occurred in 24 or 14 5 per cent
Resulting delay in correct diagnosis was

2 to 6 months in	15 cases
6 to 12 months in	5 cases.
Over 12 months in	4 cases.
The longest delay was	96 months.
The shortest delay was	2 months.
The average delay was	10 6 months

It has been a far too frequent practice to assume bronchitis to be non-tuberculous as long as the patient's general health remains good It has also been customary in many doubtful cases to keep the patient under observation until repeated examinations should settle the diagnosis, but the diagnosis should not be delayed until made possible by the appearance of pronounced signs Waiting for diagnostic signs to appear is usually equivalent to waiting for the disease to progress and is not sound medical policy when other means are at hand

Chronic non-tuberculous bronchitis occurs frequently at the two extremes of life, in asthmatics, in alcoholics, and in those whose occupations are etiologic factors, but chronic bronchitis when occurring in a young or middle-aged adult without a definite cause should be considered tuberculous unless proven otherwise. In any supposed case of chronic non-tuberculous bronchitis in which the diagnosis appears doubtful after one month's observation by a physician, the tuberculin test should be resorted to

TABLE 10

Failure of Diagnosis in Patients Who Spat Blood Previous to or During the First Visit of a Physician

Of 165 cases this mistake occurred in 21 or 12.7 per cent
Resulting delay in correct diagnosis was

2 to 6 months in	8 cases.
6 to 12 months in	4 cases.
Over 12 months in	9 cases.
The longest delay was	96 months
The shortest delay was	2 months
The average delay was	17 7 months.

The probability that the blood came from the lungs in all these cases is so great that no other supposition can be seriously considered. In many cases of pulmonary tuberculosis, hemoptysis is the first symptom This was true of 25 cases (15 1 per cent) of the total number considered To fail to diagnose tuberculosis after hemoptysis is an error which occurs with surprising frequency, as shown in Table 10 It is a particularly costly error because many of these cases are at such an early period of the disease that tuberculosis would not otherwise be suspected In several of these cases the patients were told that the blood came from the throat or stomach, some do not cough before, during or immediately after the hemorrhage, the blood simply "comes in the mouth," to use the patient's expression, without other symptoms In but four cases could a history of thorough examination of the upper air passages be obtained although it was sought for in all cases

Hemoptysis from heart lesions or from lung lesions other than tuberculosis, is so comparatively rare that all pulmonary hemorrhages should be assumed to be tuberculous until proven otherwise. This rule holds good even after an injury In two cases in Table 10 an injury to the chest was the immediate cause of the hemorrhage. Loomis[15] quotes Stricker (900 cases of hemoptysis in the German army), who shows that 50 per cent. of all cases of hemoptysis following injury are succeeded by tuberculosis If uncompensated organic valve lesion be absent, the lungs apparently clear on physical examination and the upper air passages free from bleeding points, the case should be considered pulmonary tuberculosis unless it fails to react to tuberculin To wait for physical signs or additional symptoms to appear is disastrous, as they frequently do not develop for many months, during which time the patient's chances of a cure will diminish or disappear

TABLE 11

Patients Kept in Ignorance of the Correct Diagnosis, which is Made by the Physician at Once

Of 165 cases this mistake occurred in 4, or 2.4 per cent.
Resulting delay in correct diagnosis was

2 to 6 months in	2 cases
6 to 12 months in	1 case
Over 12 months in	1 case.
The longest delay was	24 months
The shortest delay was	2 months
The average delay was	9 months.

It is to be regretted that the practice of keeping consumptives in ignorance of their true condition has not entirely disappeared As a patient can be kept from infecting others only when he understands the nature of his disease, it is not right to deprive the community of the protection thus afforded When consumptives were considered incurable the policy of deceiving the patient could be partially justified on the ground that if the person was doomed it could be of no advantage to learn of it a long time beforehand Now that consumption is known to be curable, to withhold the diagnosis is to deliberately sacrifice chances of recovery, and it is difficult to speak of such a practice without showing some of that

bitterness which patients themselves feel who have been thus deceived Two prominent excuses are

First—It is said that a person is poor, has a family to support can not make those changes in his life which a proper treatment necessitates and that, therefore, if he must succumb he had better do it undiscouraged by a gloomy diagnosis These patients, however hopeless because of poverty, family responsibilities and unfavorable environment, if informed of their disease, often receive, in addition to free treatment in a sanatorium, unlooked for aid from friends and charitable organizations and are thus saved from what seemed the inevitable

Second—It is said the diagnosis results in a shock to the patient which injures the health Of 161 cases in which the mental effect of the diagnosis of pulmonary tuberculosis was recorded 82 patients (50 9 per cent.) were unaffected, 72 (44 7 per cent) were temporarily depressed and 7 (4 2 per cent) were continuously depressed after the diagnosis It goes without saying that of the unaffected patients a large proportion considered the diagnosis unpleasant, but it was received philosophically The cases recorded "depressed" were those in which the patients evinced some emotional disturbance, weeping lack of sleep, or sufficient worry to annoy the patient temporarily Seven (4 2 per cent.) were continuously depressed after learning the diagnosis Five of these were far advanced They failed rapidly and seemed to have so much insight into their condition that their depression was logical The remaining two were advanced, and they gained as rapidly as could be expected from their condition Of the four cases in which the diagnosis was withheld for fear of a shock and injury to the patients' health, no appreciable depression resulted from the diagnosis To sum it all up, there is no evidence to show that there is any risk whatever in informing tuberculous patients of the nature of their disease

TABLE 12.
Miscellaneous Mistakes

Of 165 cases there were 9 or 5 4 per cent.
Out of these 9
5 were given no opinion
2 were diagnosed cold
2 were told to build up

Resulting delay in correct diagnosis was

2 to 6 months in	5 cases
6 to 12 months in	2 cases
Over 12 months in	2 cases
The longest delay was	18 months
The shortest delay was	2 months.
The average delay was	6 6 months

It is probable that the relative proportion of the different mistakes varies in different localities, depending somewhat on the prevalence of those diseases which tuberculosis simulates and somewhat on local custom in the diagnosis of doubtful cases In many cases diagnosed pleurisy the lung is doubtless invaded Of 165 cases, 18 (10 9 per cent.) gave a history of pleurisy previous to the development of continuous lung symptoms Thompson obtained a history of pleurisy in 25 per cent of 170 cases Febrile attacks in tuberculous individuals are too frequently diagnosed pneumonia Of 165 cases, 14 (8 4 per cent) gave a history of pneumonia averaging 11 8 years before the recognized onset of tuberculosis Seven additional cases (4 2 per cent) were diagnosed pneumonia at the onset of continuous lung symptoms Bergtold[23] obtained a history of pneumonia of a suspicious type at the onset of tuberculosis in 13 per cent of 193 cases Most of these so-called pneumonias are undoubtedly tuberculous, although there is a possibility that non-tuberculous pneumonia may have immediately preceded the tuberculous infection Finally, a non-tuberculous bronchopneumonia occasionally coexists with tuberculosis, as has been pointed out by Janeway

TABLE 13
Total Number of Cases in which Mistakes were Made and Resulting Delay in Months

Of 165 cases there were
89 cases, or 53 9 per cent correctly diagnosed.
76 cases or 46 per cent incorrectly diagnosed.

Of the 76 cases the resulting delay in correct diagnosis was

2 to 6 months in	41 cases
6 to 12 months in	15 cases
Over 12 months in	20 cases
The longest delay was	120 months
The shortest delay was	2 months
The average delay was	11 3 months

TABLE 14
Physical Condition on Admission of Patients Whose Cases Were Correctly Diagnosed Classified According to the Plan Adopted by the National Association for the Study and Prevention of Tuberculosis.

Incipient cases 15 or 16 8 per cent
Advanced cases 60 or 67 4 per cent
Far advanced cases 14 or 15 7 per cent

TABLE 15
Physical Condition on Admission of Patients Whose Cases Were Incorrectly Diagnosed

Incipient cases 6 or 7 8 per cent.
Advanced cases 58 or 76 3 per cent.
Far advanced cases 12, or 15 7 per cent

In the majority of the 76 cases in the incorrect column more than one mistake had been made, so that the total number of mistakes greatly exceeded the number of cases From the above tables it appears that only half as many incipient cases are obtained from the patients on whom mistakes in diagnosis have been made as from those patients who have been diagnosed at once The inference that, because of the 11 months' delay in diagnosis on patients in Table 13 some of the incipient cases have become advanced, seems warranted

Some of the mistakes recorded in the foregoing tables are best described as carelessness, yet it seemed probable that a large number of mistakes on early cases were due to the physician being taken off his guard by the healthy appearance of the patients The typical appearance of advanced consumptives is so deeply impressed on both physician and layman that they are slow to suspect tuberculosis in any one of robust appearance Patients with early and curable lesions frequently look a little tired or worn, but very rarely "consumptive" In Table 16 the physical appearance on admission of 191 patients has been classified as "healthy," "worn" or "consumptive" In those classified as "healthy" one would not have suspected ill-health from the appearance Those classified as "worn" had a tired look about the face as though they were overworked or had not been sleeping well, and those classified as "consumptive" had sufficient pallor or emaciation to suggest consumption, although in many cases the picture was by no means typical

TABLE 16
Showing Appearance of Patients on Admission Whether Healthy or not Classified According to Physical Condition

Of 21 incipient cases the appearance was
Healthy in 14 cases or 66 6 per cent
Worn in 6 cases, or 28 5 per cent
Consumptive in 1 case, or 4 7 per cent.

Of 134 advanced cases the appearance was
Healthy in 36 cases or 26 8 per cent.
Worn in 50 cases or 37 3 per cent
Consumptive in 48 cases or 35 8 per cent

Of 36 far advanced cases the appearance was
Healthy in 1 case or 2 7 per cent
Worn in 1 case or 2.7 per cent
Consumptive in 34 cases or 94 4 per cent

Summary of patients appearance

Of 191 cases the appearance was
Healthy in 50 cases or 26 1 per cent
Worn in 56 cases or 29 3 per cent.
Consumptive in 85 cases or 44 5 per cent

The diagnosis of pulmonary tuberculosis in people who look well or a little worn, rather than in those people whose physical appearance would indicate consumption, is the diagnosis of most value both to the patient and the community In cases in which the diagnosis is in doubt it is sometimes possible to institute an open-air régime during the period of uncertainty, in the hope that if the case is finally found to be tuberculous no time will be lost. It so rarely happens, however, that a patient will take treatment conscientiously until a positive diagnosis is made that this method of temporizing is impracticable. It is not usually necessary for the specialist to use tuberculin, because he sees few cases that have not been subjected to the waiting policy either of the patient or physician, but if we are to abandon this waiting policy then tuberculin is at present essential, because without its use many incipient cases of pulmonary tuberculosis can not be promptly diagnosed In a patient who has symptoms or signs of pulmonary disease the possibility that a tuberculin reaction may be due to an extra-pulmonary lesion is so remote that it may safely be disregarded

That there is sometimes difficulty in having the temperature taken every three or four hours for the tuberculin test is appreciated, in those who can afford a nurse for a few days this difficulty is easily disposed of The taking of the temperature in test cases might properly be made a part of the duties of district nurses Sanatoriums are only too glad to test doubtful cases which can not be diagnosed at home Patients who refuse the test relieve the physician of further responsibility In judging of the accuracy of diagnosis from the above tables it may occur to any one that some patients may have purposely been given an incorrect diagnosis (grippe, bronchitis, etc) to reassure them This possibility may be admitted without affecting the general result, as it is only the correct diagnosis given the patient that is of value Again, some patients do not return to the physician after the first visit, so that the latter does not have a fair opportunity to correct errors In order to make full allowance for this possibility, 24 cases which had been given an incorrect diagnosis were struck out from the column of mistakes, because the mistakes were discovered within two months after the first visit to the physician Some of these 24 cases thus placed in the correct column were of patients who had been given an incorrect diagnosis without an examination of the lungs To place such cases in the correct column merely because the mistakes were discovered by some one else within two months seems very liberal, yet it was thought best to err on the safe side The excluding of all mistakes, causing a delay of less than two months, allows sufficient time to diagnose doubtful cases and also a margin for slight inaccuracy of dates

In regard to the reliability of patients' statements, it has been assumed that intelligent patients are competent to give evidence on prominent facts about their illness, concerning which there is no motive for misrepresentation The opportunity of testing the accuracy of the statements of these patients has been afforded by the records of sputum examinations of the State Board of Health Of 55 cases in which the dates of sputum examinations as given by the patients could be compared with the records of the State Board of Health the year and month were given correctly in 46 cases There was a variation of one month in 7 cases and a variation of more than one month in 2 cases Since in these statistics all mistakes of less than two months have been excluded, 53 of the 55 patients were correct in their statements according to the standard employed, giving a percentage accuracy of 96 3

CONCLUSION

There can be no certainty that the patients admitted to the sanatorium fairly represent the whole number of tuberculous patients in the community in regard to their delay in consulting the physician or to the physician s delay in diagnosis Inasmuch as the sanatorium does not accept the worst cases, it seems possible that it receives those who have been more wisely handled than the average of all tuberculous patients in the community Whether or not histories of sanatorium patients, however accurate can be a safe index of the mistakes in diagnosis in the community, the following summary of patients thus far admitted to the State Sanatorium is suggestive

1 The presumable duration of the disease before admission aver aged 15 4 months
2. 50 9 per cent have delayed consulting a physician, such delay averaging 7 9 months
3 2 4 per cent. have been diagnosed throat trouble '
4 3 per cent. have been diagnosed malaria.
5 12.1 per cent have been incorrectly diagnosed without an examination of the lungs
6 18 1 per cent. have had their lungs examined and pronounced sound.
7 18 7 per cent have been incorrectly diagnosed without an examination of the sputum (sputum being present)
8 14 5 per cent. have been diagnosed grippe.
9 14 5 per cent. have been diagnosed bronchitis.
10 12 7 per cent. have not been correctly diagnosed after hemoptysis
11. 2 4 per cent. have had the correct diagnosis purposely with held from them by the physicians
12. 5 4 per cent. have had unclassified mistakes in the diagnosis
13 46 per cent. have been incorrectly diagnosed the resulting delay in correct diagnosis averaging 11 3 months.

This optimistic and fatal waiting policy should be sharply abandoned The significance of hemoptysis should be appreciated A tuberculous history should be sought for in all lung diseases, and in atypical and doubtful cases of grippe bronchitis and malaria the diagnosis should be promptly made by tuberculin when other means fail If the number of curable cases which a santorium receives is small, its usefulness is correspondingly limited and our professional pride should not allow the willingness of the state to finance the treatment of curable cases to surpass our ability to furnish the cases

Clinical Notes

THE DEMONSTRATION OF SPIROCHÆTA PALLIDA IN LESIONS OF ACQUIRED SYPHILIS *

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Of the various methods employed to establish the etiologic relation of *Spirochæta pallida* to syphilis, those concerned with its demonstration in syphilitic tissue have received comparatively little attention

The first positive findings are reported by Berterelli and Volpino,[1] who examined the liver and spleen of children dying of hereditary syphilis It was not until Levaditi by modifying the Ramon y Cajal method for

*Paper read and sections demonstrated before the Pathological Society of Philadelphia Jan 10 1907
1 Finger Wiener Klin Wochschr 1906 xi

nerve fibers, formulated an exact staining method, that spirochetes were demonstrated in sufficient quantities to make it a valuable means of studying the organism within the tissue His method is as follows Small pieces of tissue about 2 mm in thickness are hardened in formalin 10 per cent for twenty-four hours, and then alcohol for the same period and subsequently washed in water for a short time They are stained in a freshly made solution of silver nitrate 1 5 per cent. for three successive days, changing the solution each day, maintaining a blood temperature and excluding light The tissue is then placed in a 2 per cent solution of pyrogallic acid with the addition of 5 per cent of formalin After remaining in this for twenty-four hours, light being excluded, they are passed through 85 per cent., 95 per cent and absolute alcohol, respectively, imbedded in paraffin and cut at about 5 microns

By this means A. Buschke and W Fischer[2] demonstrated spirochetes in a chancre, secondary papules and in the heart muscle of a child dying of congenital syphilis, and Levaditi and Manouelian[3] report positive findings in two chancres and secondary papules, as well as in syphilitic tissue from apes artificially inoculated with syphilis Finger[1] describes the organism in two chancres, one being of the gangrenous type, and Ehrmann[4] found the organism in the epithelium covering non-ulcerated secondary lesions Buret and Vincent[5] and Veiklon and Girard[3] report positive findings in chancres and in the secondary roseola A Blaschko[5] examined four chancres and one condyloma, and Rueter[6] found *Spirochæta pallida* in a gumma of the lung and in an interstitial pancreatitis, the lesions being of congenital syphilis He also found them in the wall of the aorta, the patient having a sclerosis of the Dohle-Hellerschem type From his studies he concludes that *Spirochæta pallida* is not to be demonstrated after mercury has been ingested for a short time

We were unable to find reports of the presence of *Spirochæta* in tertiary lesions of acquired syphilis

PERSONAL OBSERVATIONS

During the past four months we have been engaged in the study of syphilitic tissue, with the object of determining the presence or absence of *Spirochæta pallida* in the lesions of acquired syphilis In selecting the specimens care was taken to include with preference only non-ulcerated and non-eroded lesions This was possible with the majority of papular syphilides, and to a limited extent with the chancres In tubercular lesions the periphery was selected, at a point showing the least ulceration, the object being to avoid contaminations of spiral organisms The method of Levaditi has been employed, and we believe it to be the best method for staining the tissue *in toto*

The specimens were removed from twenty-four patients suffering with acquired syphilis, the lesions including chancres, various papular lesions, tubercular syphilides and one gumma As controls, lesions of chancroids, chancroidal bubo, psoriasis, scabies, acne vulgaris, varicella and venereal vegetations were studied Normal skin taken from individuals was stained in the same manner and studied The following is a report of the findings in each case

CASE 1—J D Syphilis of five months' duration Was taking potassium iodid for 2 months prior to examination There was still induration present at the site of the chancre No syphilitic lesions present Has an iodid acne on the back, one being removed from the back and examined No spirochetes were found.

CASE 2—W U Chancre in sulcus Fading, slightly pigmented macular eruption on back and chest Macule removed from back No spirochetes found

CASE 3—A. H Chancre three months previously Profuse general eruption of large papulo squamous syphilides No treatment Epithelium intact, a few spirochetes were found in the cellular infiltrates

CASE 4—H. P Eruption of five days' duration History of sore on penis four weeks ago Profuse maculo papular syphilide Marked round cell infiltration, no spirochetes found

CASE 5—H T Chancre in sulcus Discrete papular syphilide No treatment *Spirochætæ pallidæ* were found in moderate numbers in the papillæ and in the connective tissue lymph spaces After five weeks' treatment of mercury in pill form, 1 gr daily, no spirochetes were found in a pigmented portion of skin removed from the back, marking the site of a syphilitic papule

CASE 6—W H A History of chancre 7 months ago Was treated at once for two months with pills, and then irregularly until five weeks ago For the past five weeks had no treatment Now has a discrete papular syphilide on the back and mucous patches on the tongue and lip Papule removed from back No spirochetes were found.

CASE 7—A. H. Syphilis of 18 months' duration Has been taking mercury and potassium iodid Has an iodid acne, one lesion of which was removed No spirochetes were found

CASE 8—J C Chancre and general syphilitic macular eruption Was circumcised and part of the chancre, the skin of the prepuce, together with a mucous patch from the scrotum and a macule from the leg were examined. *Spirochætæ pallidæ* were found in moderate quantities, in the chancre, mucous patch and macule Were not found in the skin of the prepuce

CASE 9—G A Syphilis of 3 months' duration Had neglected treatment Took eight mercurial inunctions and then discontinued treatment until eighteen days ago when he began to take mercury in pill form A fading, maculo papular eruption is still present, a papule being removed No spirochetes were found and very slight round cell infiltration

CASE 10—J Mc Had been admitted to the Philadelphia General Hospital three times in the past eight years, for the treatment of recurrent tubercular syphilides Has a large lesion on the left arm, a piece of which together with the healthy adjacent skin were removed He has taken no treatment for the past four years Spirochetes were present in moderate numbers They occurred in the deeper connective tissue, some distance from the ulcerated surface, and lying free in the lymph spaces The adjacent skin contained no spirochetes

CASE 11—W G Chancre was removed by circumcision and a syphilitic papule removed from the back *Spirochætæ pallidæ* were present in the chancre In the papule the epithelium was intact *Spirochætæ pallidæ* were found in the papillæ and in the lymph spaces of the corium A pigmented portion of skin marking the site of a papule was removed after the patient had taken mercury in pill form for 9 weeks Examination showed no spirochetes or cellular infiltration, the section appearing as normal skin

CASE 12—J W Syphilitic papule removed from back Had been taking mercury in pill form for three days Spirochetes were present in small numbers between the cellular infiltrate and within the lymph spaces

CASE 13—P Mc Chancre obtained by circumcision A maculo papular syphilide removed from the back and from the arm No treatment. Chancre shows pronounced round cell infiltration No spirochetes found in epithelium The blood vessel walls were thickened, especially the media and adventitia A number of spirochetes were found diffusely in the tissue of the chancre and the papule of the arm, but none were found in that removed from the back

CASE 14—J F Chancre removed by circumcision and syphilitic papule removed from the back No treatment Chancre

2 Deutsch. Med. Wochschr 1906 xxxii p 752
3 C. R. Soc. d. Biol., Paris 1906
4 Dermat. Ztschr Berlin, June 1906 xiii, 303
5 Med. Klin. Berlin April 1906
6 Zeit. f. Hyg u. Infect. Krank., 1906 49

showed marked round cell infiltration and a moderate number of spirochetes The papule from the back showed but slight round cell infiltration and spirochetes were demonstrated only after a most diligent examination

CASE 15.—Syphilis of several years' duration Portion of periphery of tubercular syphilide removed from leg No spirochetes were found

CASE 16.—Syphilis of 9 months' duration Neglected treatment Recurrent eruption, mucous patches in mouth and anal condyloma Was circumcised and a portion of the skin of the prepuce, together with a condyloma of the anal region examined. Spirochetes were found in the condyloma but not in the skin of the prepuce

CASE 17.—B R. Treated for syphilis by mercury in pill form for eight days Prepuce removed by circumcision and a mucous patch on it and a condyloma of the anus examined Spirochetes were found in the mucous patch of the prepuce but not in the condyloma

CASE 18.—Chancre removed by circumcision and a syphilitic papule taken from the buttocks No treatment No spirochetes were found in the chancre and the sections of the papule were also negative

CASE 19.—J B Profuse maculo papular eruption present over entire body No treatment *Spirochætæ pallidæ* were found in large numbers in a papule removed from the back A great number were present in the skin papillæ, and some sections show similar organisms between the epithelial cells

CASE 20.—J K. Syphilis of fourteen months' duration Has a large tubercular syphilide on the right leg, a portion at the periphery of the lesion and the adjacent healthy skin were examined. In one section a few spirochetes were found lying free in the lymph spaces, and in another after a careful search they were demonstrated in the depth of the tissue

CASE 21 J R. Chancre removed by circumcision and a papule taken from the side of the chest Section of the chancre showed pronounced round cell infiltration and a moderate number of spirochetes, lying between the cells The epithelium of the papule is intact, no spirochetes between the cells There is a moderate infiltration of round cells and a small number of spirochetes diffusely distributed between the cells, a few occurring around the capillaries of the papillæ

CASE 22.—Syphilis of 4 years' duration. Portion of tubercular syphilide removed from the leg Specimen showed connective tissue hyperplasia and moderate amount of cellular infiltrate No spirochetes were demonstrable.

CASE 23.—H. P Had two well defined indurated ulcers on the reflected layer of the prepuce Patient was observed for ten weeks and is still under observation but shows no evidence of a secondary eruption on the body At the end of ten weeks distinct mucous patches occurred on the glans penis Prepuce was removed by circumcision and a piece of normal skin from the back No spirochetes were found in the sections of the chancre, the skin of the prepuce or back

CASE 24.—Through the kindness of Dr A O J Kelly a specimen of gumma of the brain was obtained directly from the autopsy table A history of this patient states that he was unaware of a syphilitic infection and had never taken anti syphilitic treatment to his knowledge A portion of the gumma removed from the periphery shows spirochetes identical with those found in primary and secondary lesions of syphilis They are present in large numbers at the periphery, the remaining tissue is necrotic.

Four lesions of psoriasis, from different patients, showed hyperplasia of the connective tissue, but nothing resembling the spirochete Tissue from six cases of scabies showed only a slight degree of cellular infiltration and separation of the connective tissue due to serous exudation Three lesions of varicella from one patient showed necrotic epithelium and serous exudation A short organism resembling a bacillus about 4 microns in length, was found lying between the connective tissue bundles Nothing resembling the spirochete was found Venereal vegetations from three patients showed marked papillary and connective tissue hyperplasia, but no spirochetes Fifteen sections of normal skin from different individuals were examined with negative results Nine chancroids and two chancroidal buboes were submitted to a careful examination with negative results

It will be seen that observations were made on 24 patients, subjects of acquired syphilis, from whom 34 pieces of tissue were examined They include 7 chancres, 19 cutaneous secondary lesions, together with 3 pieces of healthy looking skin from patients with lesions of syphilis, 4 tubercular syphilides and 1 gumma

In these 24 cases positive findings were obtained in 14 and negative in 10 In the patients giving a negative result, 7 had received antisyphilitic treatment and 3 had not. It is the consensus of opinion that *Spirochætæ pallidæ* are not found after mercury has been taken for some time This has been the case with the patients we have examined, the organism disappearing before the cutaneous manifestations The time of the disappearance of the organism after the ingestion of mercury is not known In two cases in which spirochetes were found before the taking of mercury, none could be demonstrated after five and nine weeks of mercurial treatment They were found in one patient after taking mercury for three days, and in another after eight days In the seven patients where the examinations were negative, they had been taking treatment from seventeen days to eighteen months

With a few exceptions it required a careful and diligent search to determine the presence of this organism One is very likely, at times, to be confused by the similar, but not identical, appearance of elastic tissue, and we are led to believe that observers who report the finding of large numbers of spirochetes in the wall of blood vessels may have made this mistake

Spirochætæ pallidæ are always the same, no matter in what tissue they may be found, but the morphology may vary somewhat, depending on the character and age of the lesion Staining of tissue *in toto* is not the best means of demonstrating the morphology of the organism and in estimating its length the cutting of the section must always be considered

In recent lesions the organisms are distinctly spiral, taking a black stain, showing from four to twelve curves and are clear cut In tertiary lesions they seem to lose some of their distinctness of outline and assume a more wavy appearance They may be found isolated or grouped in small or large numbers, and as a rule, occur in largest numbers in the lymph spaces They are also to be demonstrated in the epithelium, but not constantly

From the findings one must consider all lesions of syphilis contagious, and handle them with due care Spirochetes have never been demonstrated in the healthy skin, even where this was taken directly adjoining a syphilitic lesion As far as our observations go, we have been unable to demonstrate spirochetes in other than syphilitic eruptions, occurring in subjects of syphilis

In conclusion, we may say that the frequency with which this organism has been demonstrated in syphilitic lesions, by numerous observers, the results of inoculation experiments on apes and the relation which this organism bears to mercury, all speak in no uncertain terms for its specificity in the causation of syphilis

We desire to thank Dr A O J Kelly for extending to us the facilities of the German Hospital Laboratory and for many courtesies extended in the preparation of this paper We are greatly indebted to Mr Karl Becker for valuable assistance in preparation of the specimens

RECOVERY FROM LEUKANEMIA *

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Patient—The case here reported is that of a child, aged 6, youngest of seven children, two of whom died during early life of scarlet fever The parents are both healthy and there is no specific taint

History—This child was always well, was a breast-fed infant, and the only illness from which she had suffered was an attack of measles two or three years ago She never had malaria, rheumatism, or influenza Her color was always good, she was not short of breath, and could run and play as well as any other child of her age

Wednesday, May 3, 1905 She went to school and seemed in her usual health

Thursday, May 4 She was taken sick with general malaise, nausea, headache, no chill, temperature in the afternoon was 101 F Thursday night she began to vomit, and Friday the vomiting was incessant, she was very restless, tossing about the bed continuously, the evening temperature reached 103 Her bowels were not loose, nor had there been anything in the diet which might suggest a cause for the vomiting

Saturday, May 6 The vomiting ceased, she was very restless, during the day she passed about one pint of bloody urine, there was no bleeding from the bowel About this time it was noticed that she was becoming very pale, she appeared pallid with a slight icteric tint Her evening temperature rose to 103

Sunday evening, May 7 Temperature was 104 5, pulse 160

Examination—There was a double pericardial friction sound heard at the base of the heart, and a venous hum heard in the vessels of the neck and over the pulmonary cartilage Lungs were negative Liver was somewhat enlarged. The spleen extended two finger's breadth below the free border of the ribs and was easily palpable The child was very restless and delirious, there was no vomiting Urine was negative, no blood and no bile

Blood Examination—A blood examination and count made on this day, gave 1,530,000 red blood corpuscles, 132,800 white blood corpuscles, 20 per cent hemoglobin (Fig 1)

Polynuclear neutrophiles	58 75 per cent
Lymphocytes large and small	19 50 per cent.
Unclassified	6 00 per cent.
Mononuclears and transitional	4 25 per cent.
Basophiles	50 per cent.
Myelocytes	10 75 per cent
Turke s cells	25 per cent

There were 20 000 nucleated red cells per c. mm

Megaloblasts	10 per cent.
Normoblasts	68 per cent.
Metrocytes	19 per cent.
Microblasts	1 per cent.

Urine Specific gravity was 1020, no albumin, no sugar Microscopic examination showed uric acid crystals, no blood, no pus cells

Course of Disease—Tuesday, May 8 The temperature ranged from 101 2 to 102 4, respiration was 30, pulse varied from 140 to 148

Wednesday, May 9 Temperature ranged from 101 to 103, pulse, 146, respiration 30

Thursday, May 10 Temperature ranged from 101 to 101.2, pulse from 132 to 144, respiration, 30

The child's condition was much improved, the pericardial friction sound was less distinct The area of precordial dulness extended one inch to the right of the border of the sternum, spleen and liver were still palpable and the anemia and pallor were still pronounced.

Blood examination 1,000,000 red blood corpuscles, 132,000 white blood corpuscles, 20 per cent of hemoglobin

Friday, May 11 Condition was about the same

Saturday, May 12 Temperature ranged from 98 to 100 pulse from 118 to 120, respiration from 24 to 28 Area of pericardial dulness extended two fingers' breadth to the right of the sternal edge The double pericardial friction sound had disappeared, the systolic murmur over pulmonic interspace and the venous hum in the vessels of the neck were still present The spleen could be palpated two inches below the free border of the ribs

Blood count 1,500,000 red blood corpuscles, 30,000 white blood corpuscles, hemoglobin, 20 per cent

Differential count

Polynuclear neutrophiles	56 per cent
Lymphocytes, large and small	20 per cent.
Mononuclear and transitional cells	14 per cent.
Unclassified	4 per cent.
Eosinophiles	1 per cent
Myelocytes	5 per cent.
Nucleated red cells 10 800 per cubic mm	
Megaloblasts	3 per cent
Normoblasts	94 per cent.
Metrocytes	3 per cent

Sunday, May 13 Temperature, 99 3, pulse, 112, respiration, 24

Monday, May 14 Temperature, 99, pulse, 112, respiration, 24

Tuesday, May 15 Blood count 2,335,000 red blood corpuscles, 14,400 white blood corpuscles, hemoglobin, 40 per cent. (Fig 2)

The venous hum was still present in the vessels of the neck The spleen and liver were not palpable, pallor was less marked Urine was negative The area of pericardial dulness was less and the pericardial friction murmur could again be heard

From this time on the improvement was quite rapid and progressive, the hemoglobin registering 60, 70 and 90 per cent, and finally, in three months, 100 per cent

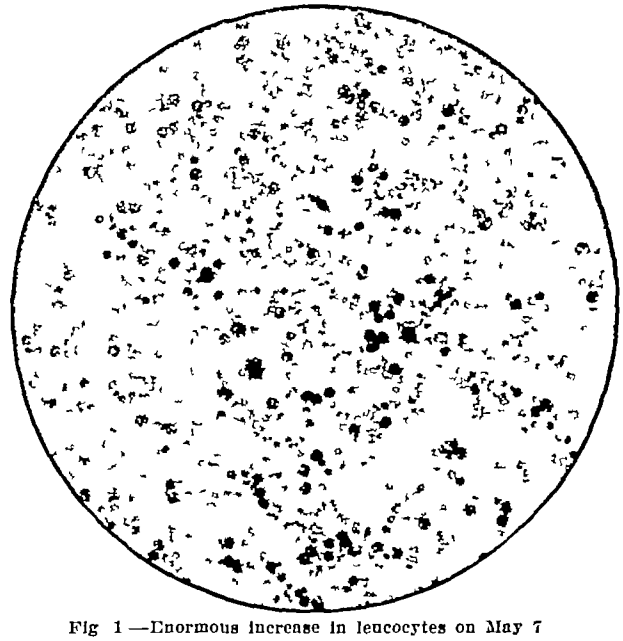

Fig 1—Enormous increase in leucocytes on May 7

The child was then up and about and seemed normal in every respect

This appears to be a case of toxemia of unknown origin, but producing a rapid destruction of red cells, with marked stimulation of the bone marrow and spleen, so that all the cells characteristic of leukemia appeared in large numbers in the circulation The destruction of the red cells was so pronounced that the blood findings also resembled those of a pernicious anemia

The blood contained many macrocytes, showed granular degeneration polychromatophilia, relatively little poikilocytosis, showed endoglobular changes, megaloblasts, marked anisocytosis, pyknotic changes in the nuclei of the red blood corpuscles, and the average red cell not lacking in hemoglobin

Perhaps in that it is not unusual in children, during the initial rise of a severe leucocytosis, to find immature leucocyte forms in the circulation, including myelocytes and nucleated red cells, this case is one of an unusually

*Read before the Society of the Alumni of Bellevue Hospital

high count accompanying a severe infection with an enormous erythrocyte destruction

von Leube in 1901 described a somewhat similar case The patient was a boy, aged 10, who suffered apparently from a combination of myelogenous leukemia and pernicious anemia running a very acute course of about three weeks with clinical symptoms of an acute infectious disease with hemorrhages The red cells were reduced to 266,000, numerous nucleated reds were present, of which 70 per cent were megaloblasts The white cells numbered 10,000

Differential count showed Lymphocytes, 40 per cent, polynuclear leucocytes, 44 per cent, neutrophilic myelocytes, 13 per cent, large mononuclear leucocytes, 2 per cent The bone marrow was hyperplastic and red, and there were myeloid changes in the spleen and liver The name of leukanemia was suggested by von Leube for this condition

Luce in 1903 described another case in which the white cells were at no time increased over 81,000, the red cells were 1,200,000, and hemoglobin 30 per cent

Differential count showed Polynuclear neutrophiles,

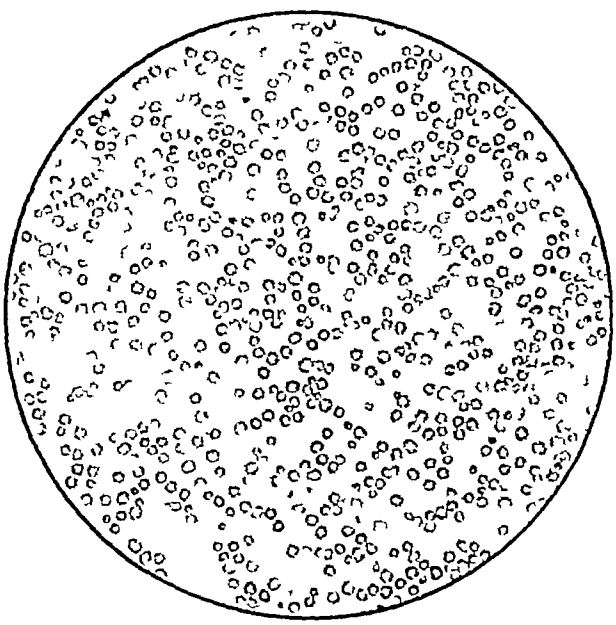

Fig 2—Return to practically normal blood in 8 days May 17 Contrast with Fig 1

46 per cent, large lymphocytes and non-granular myelocytes, 49 per cent, small lymphocytes, 4 per cent The autopsy showed leukemic infiltration of the liver and kidneys

A case of von Jaksch seems related on the one hand to acute myelogenous leukemia, and on the other hand to an acute infectious process The patient had marked anemia with multiple areas of periostitis and enlargement of the spleen, liver and lymph nodes The leucocytes varied between 10,000 and 70,000, from 4 to 30 per cent of neutrophilic myelocytes being present There is no evidence that this case could not be considered an irregular type of myelogenous leukemia, the blood picture being altered by the acute periostitis, a phenomenon often observed when leukemia is complicated by an acute infectious process

I have yet to find in the literature a case with such enormous blood changes as the one which I report terminating favorably

In conclusion I desire to thank Mr L B Goldhorn for checking some of the blood counts, also Dr L Emmett Holt, whose assistant confirmed some of the differential counts

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A RAPID AND SIMPLE METHOD OF STAINING SPIROCHÆTA PALLIDA *

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In a former paper[1] I pointed out that a solution of methylene violet (Bernthsen's), methylene blue and eosin in methyl alcohol makes an excellent stain for blood films, and suggested the use of such a solution for staining *Spirochæta pallida* With the very limited number of film preparations then at hand, some fair results were obtained by this method Recently it has been possible to get a large number of films from a case of primary syphilis and to test more thoroughly this stain The result has been so good that it seems the method may be of value in diagnosis

The case occurred in the practice of Dr Simpson, and he has very kindly furnished the following history

Patient—Male, aged 21, presented himself Jan 2, 1902, on account of a sore on penis

History—Father living and well, mother dead of tuberculosis, one brother and one sister living and well He gave a personal history of venereal disease, otherwise negative He had had no previous venereal disease

Present Illness—Patient was exposed in intercourse Nov 21, 1900 About December 1, three sores appeared on penis, one on the right side near the corona glandis, one on the dorsum and one near the frenum These were treated locally and healed December 18 About December 24 patient noticed a new lesion on the left side, this started as a small elevation which later ulcerated It was hard and painless He did not notice any other sores

Examination—Patient was well developed and well nourished Penis showed three ulcers, one on dorsum just back of the glans, about the size of a coffee bean, one on the left side slightly larger, and one near the frenum somewhat smaller All were very hard, cartilaginous and insensitive Left inguinal lymph glands were enlarged but not painful The ulcers were touched with carbolic acid and a dusting powder applied, the skin over the swollen glands was painted with iodin On January 6 smears were made from one of the ulcers and stained, with negative results On January 8, fluid was withdrawn from the swollen inguinal gland by needle puncture, coverglass films from this showed *Spirochæta pallida* in every preparation

METHOD OF STAINING

The staining solution requires the following Pure absolute methyl alcohol medicinally pure methylene blue, and a good yellowish eosin and methylene violet (Bernthsen's insoluble in water) The last-named substance is easily made from methylene blue by heating with alkali in very dilute solution The raw product, which I have designated as crude methylene violet, may be used The stain is a saturated solution of methylene violet in methyl alcohol to each one thousand parts of which one part of methylene blue and two parts of eosin are added The following formula is one I have used

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*From the Bacteriological Laboratory University of West Virginia Morgantown W Va

1 Jour of Infect Dis 1906 III 422 Full directions for making methylene violet are there given

Methylene violet (crude)	25
Methylene blue (med. pur.)	10
Eosin (yellowish)	20
Methyl alcohol (pure)	100

The dyes are dissolved in the warm alcohol by repeated shaking and then allowed to stand at room temperature for twenty-four hours before using. A bottle with a well-fitting ground glass stopper should be used.

The staining technic is in principle that of Leishman. The cover-glass is held in a suitable forcep and covered with the staining solution. This is allowed to act undiluted for forty-five to sixty seconds. By this means the specimen is fixed and thoroughly permeated with the alcoholic solution at the same time. The preparation, with the alcoholic dye still on it, is now quickly immersed in about 10 c.c. of a 1-20,000 solution of sodium carbonate, and the mixture stirred by tilting the dish. The dilute alkaline solution is conveniently prepared immediately before use by adding one drop of a 1 per cent. solution sodium carbonate to 10 cubic centimeters of distilled water in an Esmarch dish. By this means the alcoholic stain is suddenly greatly diluted by the alkaline water, and in this dilute watery mixture the staining rapidly completed. After one or two minutes the cover-glass is removed, washed in distilled water, the back carefully cleaned and dried on blotting paper, and the preparation mounted in water and examined with the oil immersion objective.

The leucocyte protoplasm should be blue, the nuclei purple, erythrocytes grayish blue or pink according to the amount of washing with water. The plasma film should contain a fine granular deposit all through, giving it a reddish tint. This should not appreciably obscure the field. If this finely granular background is absent the preparation is probably insufficiently stained. It may be dried between filter papers and stained again in the same way. Weak staining indicates, as a rule, that the methyl alcohol is not saturated with the methylene violet.

The examination of the preparation is best undertaken in the water mount. With a little care one can use the oil immersion objective very satisfactorily. A mechanical stage is a great convenience in thoroughly searching the preparation.

The *Spirochæta pallida* is intensely stained by this method, and readily catches the eye as the field moves under the microscope. It is characterized by its *regular, smooth* and *narrow* corkscrew windings, and, as a rule, is easily distinguished from bits of chromatin threads or other similar pictures found in these preparations. An inexperienced observer might, however, mistake some of these for it, but hardly after a previous careful study of a good specimen of the organism. To make a permanent mount the preparation should be blotted, allowed to dry several hours at room temperature, and finally mounted in rectified balsam. Fading is then very slight.

PRECAUTIONS

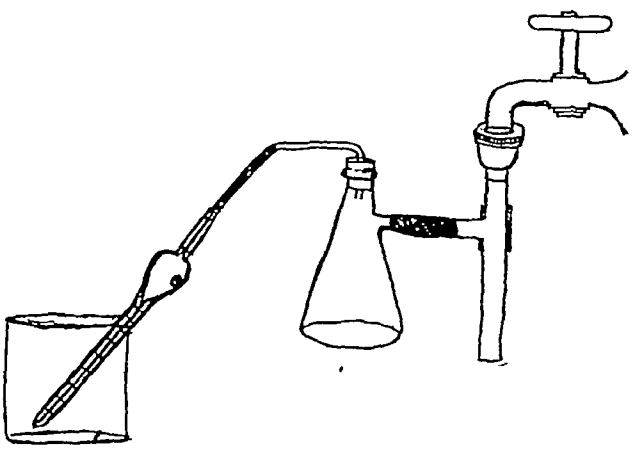
In order to find the spirochetes in a case of syphilis, films should be made before treatment is instituted, as their number is greatly reduced by the use of mercury, and the difficulty of finding them correspondingly increased. In the above case it was not possible to find them in the primary lesions, probably because of the previous cauterization and other local treatment. The lymph gland puncture revealed the organism at the first trial. The films should be made as thin as possible, using the edge of the cover-glass or slide to spread the material. The examination of the stained specimen must be made with a good light and a wide iris diaphragm, and with clean lenses of good defining power. The preparation must be thoroughly gone over. Failure to find the spirochete means little or nothing as regards diagnosis, but the discovery of this extremely slender spiral in the primary sore, or better in the swollen lymph glands, is of about the same value in the diagnosis of syphilis as the finding of acid-fast bacilli in the skin nodules of leprosy, or of similarly acid-fast bacilli in the sputum of pulmonary tuberculosis. In the case from which the films for this work were obtained the diagnosis was somewhat obscure until the spirochete was found. The patient presented three primary lesions equally hard, and he was very doubtful about the history of them. Record of the previous treatment, which had included cauterization, was not obtainable.

In conclusion, I wish to acknowledge my obligation to Professor Simpson for his cordial cooperation in furnishing the material for examination.

METHOD OF CLEANSING BLOOD PIPETTES

ALBERT ROBIN, M.D.
WILMINGTON, DEL.

I have used for years the following simple method for cleaning blood pipettes. The suction end of an ordinary air-pump (Chapman's), with a coupling for a smooth faucet is connected with a filter flask. Through the rubber stopper of the latter is inserted a bent glass tube, which is connected with the rubber tube of the blood pipette. The end of the pipette is immersed in a bearer containing distilled water and the pump started. When the pipette is thoroughly washed, alcohol, ether and air are allowed, in turn, to pass through the pipette. The entire operation requires but slight attention and no effort whatever.



Apparatus for cleansing the blood pipette.

1223 Market Street.

Man With Two Fathers.—French historians mention that the bishop of Lucon, Jacquemet Gauthier, was officially recognized in 1773, as having two fathers. His mother, three months after the death of her first husband, Jacquemet, married Gauthier, and seven months after this second marriage the child was born. On the advice of the medical faculties of Paris and Montpellier, parliament officially recognized him as the son of the two husbands, conferring the name of each on him and entitling him to inherit from each. (*Gaz. Méd. Belge*, XIX, No. 17.)

New and Non-Official Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NON-OFFICIAL REMEDIES" THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY

(*Continued from page 523*)

(A list of all accepted articles is published on one of the advertising pages of The Journal in the first issue of each month)

NOVARGAN

SILVER PROTEINATE

Novargan is an organic silver-albumin compound containing 10 per cent. of silver

It is a fine yellow powder soluble in water forming a practically neutral solution, from which it is not precipitated by sodium chloride nor affected by the usual reagents for silver salts. Solutions must not be heated and must be protected from the light.

The solution is darkened by hydrogen sulphide or ammonium sulphide, but no precipitate is produced.

Actions and Uses.—Novargan is a bactericide, it is claimed to be more effective and less irritating than other protein-silver compounds

It is said to be useful for the treatment of gonorrhea, especially as an abortive in the first stage

Dosage.—0.5 Cc. (8 minims) of a 15 per cent. solution, by instillation on the anterior surface of the urethra, through a catheter (23 Cm. (9 in.) long, No. 13 French scale) as an abortive

Manufactured by The Heyden Chemical Works, Radebeul, Germany, and Garfield, N. J. U. S. trademark.

ORGANIC IRON PREPARATIONS

"MASKED" OR "NON-IONIC" IRON

The term "organic iron" is confined by modern usage to those organic compounds of iron which do not give the chemical tests of this metal (blue color with potassium ferrocyanide, blue-black color with hematoxylin, etc.) until the structure of the molecule has been destroyed by reagents. The resistance to this destruction varies greatly, some (such as hemoglobin) require incineration or the action of concentrated acids, while others give the iron-tests after treatment with even fairly dilute acids. The organic iron compounds occurring naturally in animal and vegetable tissues (which are often termed "food-irons") belong generally to the more resistant class, while the iron of the synthetic preparations is usually liberated fairly readily. This does not, however, constitute a sharp line of distinction between the two classes, nor is there any good evidence that they differ in therapeutic action. Until this difference is established all organic iron preparations, whatever their source, may be placed in a single class. It is evident, however, that an organic iron (chemically) which is destroyed by 0.2 per cent. hydrochloric acid at the body temperature, can not be classed as an organic iron in the therapeutic sense. It should also be emphasized that salts of iron (which give the iron tests directly) are classed as inorganic iron whatever the acid radicle. True albuminates, peptonates, etc., of iron are, therefore, inorganic.

Actions and Uses.—Organic iron preparations are used to increase the hemoglobin in conditions of anemia. Bunge supposed that only organic iron could be absorbed and assimilated by the body, the reputed action of inorganic iron being altogether indirect, and due to its local effects on the alimentary canal. This theory was modified by Abderhalden, to the effect that inorganic iron, while it could not be converted into hemoglobin, nevertheless stimulated the assimilation and conversion of organic iron. The latest work, however (Tartakowski) seems to prove conclusively that inorganic iron is assimilated and converted into hemoglobin, and is in so far therapeutically, fully equal to organic iron. Many authors, however, still adhere to the theories of Bunge and Abderhalden. At all events, a real difference exists between the organic and most of the inorganic preparations, namely, in the local irritant and astringent action of the latter, and the absence of these effects in the organic compounds. These actions may be desirable in some cases, and undesirable in others. It should also be remembered that organic iron may often be administered in sufficient amount, and most economically, by selecting a dietary rich in iron, such as red meats, egg-yolks, green vegetables, whole wheat, etc.

PROTARGOL

PROTEIN SILVER SALT

Protargol is a compound of albumin and silver, containing 8.3 per cent. of silver in organic combination

According to the patent specification insoluble protein silver compounds, obtained by treating protein bodies with silver salt, are rendered soluble by treatment with a solution of albumoses.

It is an impalpable yellow powder, soluble in twice its weight of cold water producing a solution which is not affected by the ordinary precipitants of silver salts, such as alkalies, sulphides, chlorides, bromides, iodides, nor by heat.

Ammonium sulphide gives a dark color to the solution without precipitation. Addition of strong hydrochloric acid produces a precipitate of unchanged protargol soluble in a large quantity of water. A solution containing sulphuric acid is not colored blue by diphenylamine. It is compatible with picric acid and picrates and with most metallic salts. It should not be exposed to light. It is precipitated by cocaine hydrochloride but this is prevented by addition of boric acid.

Actions and Uses.—Protargol is a non-irritant bactericide and antiseptic. It is being recommended in acute and chronic gonorrhea as a non-irritant substitute for silver nitrate and in diseases of the mucous membranes of the eye, ear, nose and throat, particularly for the treatment of conjunctivitis.

Dosage.—From 0.25 or 1 per cent. solutions in acute gonorrhea, to 5 or 10 per cent. instillations in chronic cases, in cystitis and urethritis, in solutions of 1:1000 to 1:200 as irrigations. Used also in form of bougies and tampons (5 to 10 per cent.). Its solutions in water are made by pouring on the protargol a little *cold* water, stirring into a thick paste, and gradually adding the remainder of the water under stirring, or by sprinkling the protargol on the surface of the whole of the water (cold) and setting it aside until solution occurs.

Manufactured by Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York). U. S. *patent* No. 615,970. U. S. *trademark* No. 30,882.

(*To be continued*)

Naming of Carbon Compounds.—Ene: the suffix en or ene generally indicates the unsaturated group C:C, thus CH:CH, is ethene (eth-ene). *Exceptions*: terpene, naphthalene, anthracene, etc. Enol: The suffix enol (en + ol) indicates an unsaturated alcohol, thus: CH:CHOH is ethenol.—*Pharm. Rev.*, August, 1906.

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[For other information see second page following reading matter]

SATURDAY, FEBRUARY 16, 1907

SCARLET FEVER AND MILK

There can be no question that scarlet fever is commonly spread by what is more or less loosely denominated "contact," a term applied to fairly close proximity to persons suffering from the infection, or to clothing and other articles handled by or brought into the neighborhood of the patient or convalescent. Other modes of dissemination, however, must not be overlooked It has been asserted by the daily press of Chicago that the recent extension of scarlet fever in that city has been due, in part at least, to infected milk, especially in the suburb of Evanston, where it is claimed that a fairly direct connection has been shown between the use of milk distributed by a particular company and the appearance of cases of scarlet fever We have not ourselves made any investigation of this epidemic, and so far as known an official public report has not yet been published Since the possibility that scarlet fever can be conveyed by milk has been called in question in some quarters, however, it seems worth while to consider briefly what the evidence really is that scarlet fever can be transmitted in this way

Even a partial survey of the literature on this subject shows that sanitary authorities are unanimous in attributing certain outbreaks of scarlet fever to milk infection Swithinbank and Newman, in their comprehensive treatise on the "Bacteriology of Milk," have tabulated, with references and abstracts, some 40 different epidemics of scarlet fever comprising over 3,400 cases that have been traced by competent investigators to the use of milk from infected dairies A typical instance or two may be cited In one outbreak occurring in Upper Clapton, England, in 1892, 178 cases of scarlet fever appeared suddenly in a localized area among houses of good class supplied by a particular milkman Most cases occurred where most milk was consumed, and the houses supplied by the particular milkman had twelve times as many cases as all of the other households supplied by all the other milkmen in this district It was found that a child in the family of one of the men engaged in handling the milk had suffered with scarlet fever and the outbreak was not unreasonably attributed to infection of the milk from this source

Another important instance of milk infection was investigated under the auspices of the Massachusetts State Board of Health [1] This outbreak occurred in the cities of Beverly and Salem and on a neighboring island—Baker's Island In Beverly, out of twenty-one patients with scarlet fever, nineteen used milk supplied by one dealer Every one of the twelve patients on Baker's Island had used milk supplied by this milkman, while others on the island who had obtained milk from other sources had not been taken ill On the first suspicion that the milk supply was the probable source of infection, the Boards of Health of Beverly and Salem ordered the dealer to discontinue distributing milk in these cities This occurred on July 8, and, allowing for patients already infected to become ill with the disease, only five additional cases developed after the infection had been stopped, although in the first half of the month there were fifty-five cases, not including those on Baker's Island On visiting the three farms from which the milk dealer obtained his supply it was found that on one of them three children had been sick during the preceding month with what was considered undoubtedly a mild form of scarlet fever One of these children, a boy fourteen years of age, assisted in the handling of the milk The sudden outbreak of this epidemic and the equally sudden cessation, after the source had been determined and the distribution of the milk discontinued, are especially significant

It is by a detailed study of epidemics of this character that health authorities have become convinced that it is possible for milk to serve as a vehicle of infection in scarlet fever Objection has been made that, since the germ of scarlet fever is not known, the mode of spread of the disease is also conjectural This position is quite untenable We know that hydrophobia can be communicated by the bite of a rabid dog, although the germ of hydrophobia is still unknown No one can believe that our knowledge of the mode of spread of smallpox would be materially more complete than it is if the parasite of the disease were known to us The fact that typhoid fever can be spread by infected milk is universally recognized and the evidence in case of scarlet fever is of exactly the same character and is quite as conclusive As a matter of fact, the typhoid bacillus has never been found in milk suspected of having caused an outbreak of typhoid fever, and from the standpoint of scientific evidence the finding of either typhoid bacilli or scarlet fever germs in milk would not in any wise strengthen the case for milk infection It may be pointed out that long before the germs of Asiatic cholera or typhoid fever were discovered the evidence that these infections were commonly water-borne was overwhelming and was accepted by all clear-thinking investigators While it seems clear that scarlet fever is less commonly spread by milk than is typhoid, there is no doubt that the danger exists and should be guarded against. If a particular epidemic is proved to have some other source, this does not invalidate the general proposition

1 Report of Mass State Board of Health 1901 p 761

EXPERIMENTAL SYPHILIS

Although it was claimed by Klebs as long ago as 1879 that syphilis could be artificially produced in apes, the subject did not receive much attention till a few years ago, when Metchnikoff and Roux took up the work afresh at the Pasteur Institute The success of these investigators led to further research, in which a prominent part has been taken by Neisser of Breslau and Finger of Vienna

The researches of Metchnikoff and Roux were carried out on the higher anthropoid apes, the chimpanzee especially being used It was shown that syphilis could be inoculated into these animals with the production of a primary lesion, after a period of incubation, followed later by secondary manifestations Metchnikoff and Roux laid stress on the fact that anthropoid apes were necessary, but later experiment has shown that some varieties whose relationship to man, as shown by the precipitin test, is remote, may contract syphilis In the more remote species of ape, however, the disease is not so typical, the incubation period is usually shorter, and the secondary manifestations are abortive or even lacking, according to the nearness in blood relationship to man

The revival of the experimental work on apes has led to a similar revival on rabbits It is not generally known that in 1881 Haensell claimed that he was able to produce inoculation syphilis of the iris and cornea in rabbits In one animal he even described gummata in the liver Schucht,[1] working with Neisser, has repeated these experiments, and has been able to confirm them Using an emulsion of inguinal glands from fresh cases of lues, which he inoculated into the anterior chamber of the vitreous, he was able to produce in some instances a parenchymatous keratitis, in others a lesion which resembled a gummatous iritis The lesion appeared only after a long period of incubation, was not at all comparable to an ordinary infectious eye process, and was always accompanied by the *Spirochæta pallida* in large numbers In no animal did Schucht find evidences of generalization of the process, none showed lesions of the internal organs, and in none did an examination of the blood serum show evidences of the disease

It is evident from these researches that syphilis is more or less transmissible to the lower animals, and that, although the best chances of success are gained by using animals closely allied to man, some remote from him in blood are also susceptible This experimental work has thrown some light on aspects of the problem of syphilis which were, at best, poorly illuminated by clinical experience It has been shown many times in the experiments on monkeys that the organism of syphilis belongs to those which must enter the body in a particular way in this instance through an abrasion If the virus be introduced into the blood, into the peritoneal cavity, or subcutaneously it fails not only to produce the disease but also to produce any protection against a later inoculation of the surface The period of incubation of the disease, as shown by the experiments, corresponds very closely, both in monkeys and in rabbits, to that which clinical experience had laid down as the period in man In rabbits the average period of incubation is about twenty-nine days, in apes the average is a little lower, and as a rule, the disease seems least virulent in them when the incubation is short The question of the infectiveness of the blood has also been cleared up to some extent, and it has been shown that even six months after the onset of the disease it still contains the causal parasite

The infectiousness of the tertiary lesions has been proved both by Finger and Landsteiner and by Neisser, though it is not claimed that all tertiary lesions are equally infective, and many of the experiments were failures The infection of the spermatic fluid has likewise been demonstrated, though here, again, the percentage of cases in which such infectiveness could be shown was small In many ways the work has led to valuable discoveries, and more will probably follow

1 München med Wochschr Jan 15 1907

HOSPITAL AND DISPENSARY ABUSE

It is strange that the hospitals and dispensaries of this country should be so shamelessly flooded with pseudo-charity patients, having no claim whatever to gratuitous service It can be explained only on two hypotheses First, the working of that innate trait of human nature which prompts to obtain something for nothing, and, second, the lack of good business discrimination on the part of the institutions whose benefits are thus abused.

From the point of view of the profession the abuse is a serious one Many a struggling young city physician is deprived of the opportunity of earning a living because patients, who are amply able to pay ordinary fees, stultify themselves by accepting hospital alms The value, too, of medical service, in the eyes of the laity, is much depreciated, as, indeed, is always the case when things can be obtained without effort or sacrifice The individual who, at a dispensary, has received careful treatment at the hands of one of the leading specialists of the city at no greater outlay than the time and trouble he took to present himself at the clinic, will hesitate a long time before paying from one to five dollars for the same service at the hands of one of the rank and file of the profession

But from a humanitarian standpoint, one important reason why this abuse should be remedied is that the worthy poor, the class for which such institutions are supposed to exist, are deprived of the opportunity of using them Every year hundreds of the sick and needy, in the large centers of population are unable to get free medical service from the hospitals and dispensaries because these institutions are already overcrowded and worked beyond their capacity This, of necessity, in-

creases the gratuitous work of which the general practitioner, under the most favorable circumstances, has so much to do And all this because well-to-do individuals, who would be righteously indignant if accused of stealing, are filching from the needy the attention and service which state and individual enterprise have provided

To such an extent has this abuse spread that in some places active measures have been taken to check it In Europe, where the hospitals are so largely supported by voluntary contributions, the abuse has become a menace to their continued existence Only recently in London an important conference was held to consider ways and means of checking the evil, while the Vienna hospitals now demand a "testimonial of poverty," signed either by the landlord of the tenement in which the applicant lives or by specially appointed guardians of the poor In this country some of the medical societies have passed resolutions decrying the abuse, but so far as we know no active measures have been taken to check it

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MRS MARY BAKER EDDY'S CASE OF HYSTERIA.

No one more than the writer of the serial articles on the Christian Science cult appearing in the current numbers of *McClure's Magazine* is likely to approach the life history of Mary Baker Eddy with the same regard for accuracy, the same respect for truth, and to bring to the laborious task the same indefatigable energy so necessary for an enduring type of biographic research

deed, as a contribution to our knowledge of the woman d her creed, it is so singularly free from invective and irreverence as to compel admiration and challenge inquiry Discrediting all that has been said or written of "Mother" Eddy by penny-liners and pamphleteers and submitting as evidence only the testimony set forth in *McClure's,* how much appears there in support of the fact, not the theory, that Mrs Eddy always has been, is, and always will be, the pitiable victim of the grand neurosis, better called grand psychosis—hysteria?

Mrs Eddy, it can not be denied, is a religious type, Mrs Eddy, it will not be denied by those qualified to say, is a pathologic type and, if you please, a clinical entity How shall she be classified? Relieved of the glamor of deification, stripped of her self-endowed sanctity, the founder of the Christian Science church has her counterpart in many of the types of psycho-neurotics and hysterics studied and grouped by Charcot, Briquet, Guinon, Colin, Freud, Moebius, Janet and Mitchell

The rôle of heredity is manifest in Mrs Eddy's family history, although its pathologic proportion, so far as we are privileged to know, is not great. On the paternal side, the high temper of the father rose to uncontrolled acts of destructiveness The mother, we are told, was an ardent reader of the Bible and believer in miracles Whether the "ghostly visitations" which came to the daughter Mary at the tender age of eight years are to be interpreted as hysterical hallucinations of an auditory or visual type, it is, in the spirit of fairness, difficult to say The Shaker cult and the pervasive influence of its religious mysticism on the community for miles around the Baker home together with early and intensely religious training, would tend to make the youth of that period impressionable and visionary It should also be remembered that the Samuel-like experience of "being called" is not without a parallel in the life of that other sanctified personage, Ann Lee, "Mother Ann" of Shaker fame. In the abstract, all autosuggestion of this order must be construed as hysterical, but, as a sign of the times, it is robbed of some of its prestige in Mrs Eddy's own case

Following the recital of many and diverse spiritual events, her biographer points out the chronic state of her physical ills, and one is impressed with Mrs Eddy's easy transition from psychologic to pathologic premises The leniently disposed of her friends called the girl Mary "different" from the rest of the family Others, more critical, referred to her "tantrums" and the ever amiable, yet outspoken, Dr Ladd unhesitatingly pronounced her case as one of "hysteria mingled with bad temper" From her girlhood days, until "the patient" attained the age of 40, hysteric episodes, fits, seizures, trance-states, and nervous invalidism abound To the precocity of Mary Baker's childhood, the brooding and spiritual unrest of her adolescence, it is pertinent to add the disastrous effect of two disappointing marriages, which, together with other overwhelming domestic infelicities, established a deep-rooted neural instability, fraught with obsessions, phobias, imperative ideas, catalepsies and well-poised megalomania

From a neurologic viewpoint, no great power of discernment is necessary to see, in Mrs Eddy's early abandonment of her son, an act betokening profound psychic anesthesia, which condition is not at all uncommon in the mental state of hysterics And all the apologies sung by her in poetry or prose will not suffice to explain away this act except as a phenomenon of a morbid mind Adhering still more closely to an analysis of the mental state, what psychologist will fail to take cognizance of Mrs Eddy's irrepressible, colossal egoism, by virtue of which she calmly appropriated all of her benefactor Quimby's "Art of Mind-Healing" and erected his doctrines into a creed which utterly offends through its immature logic and immodest use of I's? "*I* called it *Christian* because it is compassionate, helpful and spiritual God *I* called *Immortal Mind* The physical senses, or sensuous nature, *I* called *error* and *shadow* Soul *I* denominated *substance* because soul alone is truly substantial God *I* characterized as individual entity, but his corporeality *I* denied The real *I* claimed as eternal, and its antipodes, or the temporal, *I* described as unreal Spirit *I* called the *reality* and matter the unreality" Just where the morbidly conscious "ego" retires, to let rank plagiarism sit in its place, may be seen in Mrs Eddy's successful effort at emulating Shakerism

Mother Lee is the God-anointed woman, Mother Eddy, the woman God crowned, Mother Lee's Church is the Church of Christ, Mother Eddy's Church, the Church of Christ, Scientist (Note further parallelisms in *McClure's* of February) All of this and much more is so expressive of the hysteric "ego" as to merit prominence in any estimate of Mrs Eddy's psychopathic state

The history of an initial injury to the back from a fall on the sidewalk, the subsequent avowal of an incurable spinal trouble, the years of total disability in the legs, the vague and experimental treatment with its failures, the appeal to Quimby in such phraseology as "and only you can save me"—the arrival at Quimby's "without sinking from the effects of the journey"—the cure so suddenly wrought that, "in less than one week, I climbed 182 steps to the Dome of the Portland City Hall, and in three weeks a spinal trouble of years' duration entirely disappeared"—what else is all this but the familiar picture of a classic hysterical paraplegia?

Therefore, be it said in justice to the founder of this twentieth century cult that, from a specialistic viewpoint, Mrs Eddy is the victim of a mental malady, in which hereditary influence, provocative agents, motor accidents, physical and moral shocks painful emotions and mental disintegration are so strangely mixed and yet so obviously present that the diagnosis of hysteria is at once easy and convincing

ALCOHOL IN THE NAVY

The article of Dr Lovering in this issue raises certain questions which are worthy of serious consideration If, after forty years of prohibition, the disability from alcoholism in our Navy is seven or eight times greater than in the British and German navies, it might not seem so illogical to advocate the reintroduction of the grog ration or, at least and probably much better, the beer-selling canteen When, however, as Lovering says, the sentiment in favor of temperance is weak, the officers discourage it by their example and by neglecting to discriminate in matters of promotion and privileges between the man who has proved himself untrustworthy by disabling habits of alcoholism and the temperate man, there would seem to be possibly another remedy to be first tried If officers themselves are not temperate examples, we have in this alone a serious handicap to any temperance regulations for those below them Objections might easily be made to giving up the use of wines and liquors on account of the alleged necessity for entertaining in foreign ports, etc, but if the absence of liquor was a government regulation the officers themselves could not be blamed and the parties higher up could stand it It would probably have as a compensation a considerable economy in the mess bills, and it is going a long way to urge that there is any necessity on their own account for even moderate drinking by naval officers How many disasters and how much money lost are due to drinking habits of American naval officers no one could positively say, but that there have been such disasters and losses in navies no one can deny, and there is an ever-present possibility of such in the existing state of affairs In former times the idea was that the fighting men in the navies did better for stimulation, and the serving of grog was a regular preliminary to an engagement At the present day "the man behind the gun" needs all his nervous power at its best He works with instruments of precision at long range, instead of the old fashion of yard-arm-to-yard-arm gunnery methods, in which the reckless valor induced by alcoholic stimulation seemed to short-sighted officers to be an advantage

GASTROSTAXIS

Hematemesis may be the result of a variety of conditions, the most common of which is gastric ulcer In a certain number of cases of profuse hemorrhage from the stomach no lesion is discoverable at operation or at autopsy By some this form of bleeding has been supposed to be vicarious, at times taking the place of menstruation or of hemorrhoidal discharge In the opinion of Dr W Hale White,[1] who discusses the entire question at considerable length, the hemorrhage under the circumstances mentioned is due to the oozing of blood from the mucous membrane of the stomach or duodenum He has adopted the term gastrostaxis as descriptive of the disorder, in analogy with epistaxis White has succeeded in collecting twenty-two cases of the kind from the literature, including two of his own, and to these he adds reports of seven previously unpublished cases Only such cases are included as exhibited after death or on inspection of the interior of the stomach during life an absence of ulceration or of other recognizable cause for hemorrhage Twenty-seven of the patients were women and only two men The vast majority of the cases—twenty-three—were observed between the ages of 21 and 39 years—twelve between 21 and 29 and eleven between 30 and 39 The youngest patient was 18, the oldest 54 The essential symptom of the disorder is the hematemesis, but in addition there are vomiting and pain in the epigastrium The bleeding varies within wide limits at times being rather profuse It may be repeated frequently over a long period of time No cause for the disorder has yet been discovered The affection is uncommon, having been observed but three times among 7,500 autopsies at Guy's Hospital out of a total of 32,000 cases Recovery appears to be the almost invariable outcome The condition can, as a rule, be readily differentiated from other forms of gastric hemorrhage with the exception of gastric ulcer In the last-named disorder, however, the vomiting is likely to be greater and the remaining symptoms more pronounced and more unyielding or more persistent In the way of treatment the patient should be kept quiet in bed for some time after the bleeding has ceased He may be permitted to suck bits of ice, but for a time he should have no food From five to ten minims of a solution of adrenalin hydrochlorid 1 to 1,000, may be given [illegible] the mouth, also a solution of ferric cl [illegible] an equal amount of glycerin, [illegible]

1 Lancet Nov 3 1906 p 1189

cium chlorid may be given thrice daily Surgical intervention is definitely contraindicated Three or four days after the bleeding has ceased milk may be given in rather generous amounts, and the diet thereafter may be gradually and progressively increased

ANOTHER MEDICOLEGAL POINT SETTLED

An English physician was recently sued by a patient for a betrayal of professional confidence The remarkable thing about the case was that the confidential information was not communicated to a third person, but to the physician himself It appeared that the physician's chauffeur was taken ill and entered an infirmary, in which place he came under his employer's care Examination revealed the fact that the man was suffering from aortic disease and was evidently unfit to have charge of an automobile On the chauffeur's recovery (the physician having meantime betrayed the professional secret to his business self), he received two weeks' advance salary and was discharged Thus arose the question whether the employer, coming into possession of confidential information in his professional capacity, might use that knowledge to determine his actions in a business capacity to the detriment of the employé All right-minded men must admit that it was a shameful abuse of a privileged communication There was but one course open to the employer as a physician That was to continue to ride behind the chauffeur, keeping inviolate his professional secret, until the aortic lesion resulted in a broken neck for the medical man, at which time he might with perfect propriety discharge his employé for evident incapacity The court, however, persisted in looking at the matter from a purely common-sense standpoint and refused to grant a judgment in favor of the victim of misplaced confidence

ANTHROPOID APES AND EXPERIMENTAL MEDICINE

Darwin has often been misquoted as stating that the human race sprung from the monkey tribe, when what he really said was that man and the monkeys probably came from a common ape-like ancestor The work of the past five or six years with the precipitin test, and more especially the investigations of Nuttall, have in part substantiated Darwin's views, showing a close blood relationship between man and the higher apes As showing the value which an apparently abstract piece of knowledge may have when applied to practical uses, the effect of this discovery on the investigation of infectious diseases may be cited It is, of course, well known that a few years ago there were, and are still, a number of diseases which we regarded as undoubtedly infectious, in which absolute proof of their infectivity was lacking because the lower animals were not susceptible to infection with the supposed causal agent This was true of syphilis, of typhoid fever, of leprosy, and of yellow fever The successful transmission of syphilis to apes is now well known, but it is probably not such common knowledge that typhoid fever and leprosy have also been reproduced in apes Recently Thomas[1] has repeated the classical experiments of Reed and his confrères on yellow fever, using the chimpanzee for the subject of the experiment. He has been able to produce in this animal a typical attack of mild yellow fever with bile in the urine, albuminuria, and the usual febrile course Doubtless other infectious diseases will be attacked along these lines in the near future

1 British Med. Jour Jan 19 1907

Medical News

ILLINOIS

Communicable Diseases—Smallpox is reported from Bradford and Osceola township, Stark County ——The State Training School for Girls, Geneva, is reported to have 13 cases of scarlet fever ——For the second time this winter the public schools of Humboldt have been closed on account of scarlet fever

Personal.—Dr Elmer M Eckard, health commissioner of Peoria, has recovered after a long illness ——Dr Henry Rich ings, Rockford, is seriously ill with inflammatory rheumatism ——Dr Joseph De Silva has been appointed president, and Dr J W Stewart, vice president, of the Rock Island County Humane Society ——Dr William C Spannagel, East St Louis, has been appointed deputy coroner, vice Dr Henry G Hertel, who left for San Antonio, Tex, February 1 ——Dr and Mrs Noel R. Gordon, Springfield, have gone to San Antonio, Tex, for a month.

State Health Board Issues Circulars.—During the last few weeks the State Board of Health has issued three circulars, which are just now of more than ordinary import, on the prevention, restriction and suppression of scarlet fever, diphtheria and typhoid fever Thousands of copies of these circulars are being sent to infected municipalities In the circulars have been incorporated the most recent facts regarding practical disinfection. The method of formaldehyd potassium permanganate disinfection is described in detail The board has in preparation revised circulars on infant feeding and tuberculosis The combined edition of these circulars will amount to more than 150,000 copies

Chicago

Personal.—Dr Charles S Bacon sailed for a two months' visit to Europe, February 13 ——Dr Jacob Frank has returned from a trip to the West Indies

Endow Bed in Hospital—The Policlinic Nurses' Alumni Association held its first annual reception and ball February 7 The proceeds, which amounted to about $500, were devoted to the endowment of a bed in the new Henrotin Memorial Hospital now being erected at Oak Street and La Salle Avenue

Epidemic Diseases—The number of cases of scarlet fever and diphtheria have markedly decreased On February 10, 43 cases of scarlet fever and 23 cases of diphtheria were reported, and on February 11, 32 cases of scarlet fever and 20 cases of diphtheria The health department warns the public that an epidemic of influenza is impending

Guthrie Bowlder Must be Removed.—Judge McEwen, on February 7, gave a decision regarding the bowlder placed in Lake Front Park in memory of the late Dr Samuel Guthrie, in which he denied the writ of injunction by which the Chicago Medical Society sought to restrain the park commissioners from interfering with the bowlder

Anatomy Museum Proprietor Arrested—Dr J W H Camp was arrested January 31, on the charge of obtaining money under false pretenses, made by a 16 year old boy, who stated that he went into the museum of anatomy of the accused, and was there told that he was suffering from an incurable disease and would die in three days unless he took treatment. In his alarm the boy gave the proprietor $125, but soon found that he had been deceived On February 6 Dr Camp is reported to have been fined $200 and costs and ordered to return $100 of the money said to have been obtained under false pretenses

Mortality of Week.—During the week ended February 7, 783 deaths were reported, equivalent to an annual mortality of 19 38 per 1,000, an increase of 42 over the previous week, and of 217 over the corresponding week of 1906 The chief death causes were Pneumonia, 153, consumption, 70, heart disease, 56, nephritis, 52, scarlet fever, 44, violence (including suicide), 36, nervous diseases, 30, bronchitis and acute intestinal diseases, each 28 Diphtheria caused 15 deaths, measles, 11, typhoid fever and whooping cough, each 9, and influenza, 8

Cocain Shop Closed—A drug store which has been most noted for its illegal sale of cocain, and against which the crusade has been especially directed, has been closed by its proprietor, who says he will not reopen it——Dr Alfred Dahlberg, convicted of selling cocain, who disappeared from Chicago and whose bond was ordered forfeited, returned to the city February 11 and, in default of bail, was committed to the county jail

Instructions to Medical Inspectors.—The department of health has issued rules for medical inspectors of schools which state that medical inspectors should familiarize themselves with the city health ordinances, that inspectors should be governed by the Principles of Medical Ethics of the American Medical Association, that inspectors should call daily at the schools assigned to them and request the principals to furnish the names and addresses of all pupils absent from school without known cause for four consecutive days, that principals should not let such an absentee re-enter school without a certificate from the medical inspectors, that inspectors should go to the homes and determine if pupils can safely return to school, that pupils suspected to be suffering from infectious diseases should be reported by the principal to the inspector The circular gives in detail the duties of the inspector in cases of various communicable diseases Inspectors are forbidden to make suggestions as to treatment or management of pupils who are ill

INDIANA.

Banquet to Staff—In accordance with their annual custom, the Sisters of St Francis, Lafayette, served a banquet in honor of the staff of St. Elizabeth's Hospital, January 15 Covers were laid for 46 guests

Unlicensed Physician Fined.—O C Brown, Martinsville, is reported to have been fined $25 and costs, January 16, on the charge of practicing medicine without a license He appealed to the Circuit Court The prosecutor was assisted by Attorney Gavin, representing the state medical board

INDIAN TERRITORY

Medical Society Meets—The Medical Society of the Fifth Recording District met recently at Pryor Creek, three new members being admitted Dr J H Todd, Kansas, Dr J E Bristow and Dr F M Jones, each of Pryor Creek The society's name was changed to the Mayes County Medical Society At this meeting a paper was read by Dr U T Tilly of Pryor Creek on "Pelvic Inflammation" Dr Tilly, who is president of the Northern District Medical Society, called attention to the great responsibility resting on the general practitioner in correctly diagnosing and treating this condition He deprecated both the excessive local treatment given by some and the insufficent examinations made by others He considered prophylaxis of the greatest importance A patient requiring surgical treatment, he believed, should not be treated expectantly, as no cases of true ovaritis can be cured by hot water douches or tampons Dr Tilly's paper was freely discussed and aroused much interest

MARYLAND

Unregistered Physicians Fined.—"Dr" Oscar W Baysan, an "herb doctor" of Talbot County, was fined $50 and costs February 4 for practicing medicine without first having been registered——On the same day John A Watson is said to have been fined $200 on the same charge He is said to be the head of a private sanitarium at Frostburg It is reported that he will appeal on the ground that the law is unconstitutional

Laxness in Insane Commitments.—Dr George J Preston, secretary of the State Lunacy Commission, in his report points to the laxness with which the insane are committed to asylums in the state It is possible to commit an individual without further inquiry, simply on a certificate signed by two physicians Thus if relatives wish to put a person away, great injustice might be done, especially with connivance on the part of officials of the institution While Dr Preston believes that this never has happened, he thinks it should be made legally impossible He believes that the present law deprives a man of his liberty without opportunity to protest He suggests that the papers should be signed by the judge of a court of record, before whom the alleged insane person and his friends should also have the right to appear with witnesses and counsel Publicity need not be necessary for the proceedings, as the judge could sign papers in chambers

Baltimore

Accidents and Suicides.—During January 11 suicides were reported in the city and in addition 12 unsuccessful attempts There were also 34 fatal accidents and 236 minor accidents reported

Dispensary Report for 1906—The Northeastern Dispensary reports 18,953 patients treated during the year, 1,041 being visited at their homes, 1,491 operations were performed. Dr Arthur Wegefarth was elected president, and Dr A D McConachie, secretary

Personal.—Dr Clarence B Farrar, of the Shepard and Pratt Hospital is giving a course of six lectures on physiological psychology in connection with the Psychologic Department of Johns Hopkins University——Dr Thomas L Sheaver, known as the "hatless" man, has introduced the custom of going about without a hat

Acquitted—Dr Daniel W Smith who was tried in the Criminal Court February 1 on the charge of failure to report to the health officer a case of typhoid fever which he was treating during the epidemic last spring, was acquitted, as he stated that he reported the case as soon as he was satisfied that it was typhoid fever

NEW YORK.

New Building for Children's Hospital.—Through the generosity of Mrs Charles W Pardee the Children's Hospital, Buffalo, is to have a new fire-proof building, to cost about $100,000

Staff Elected.—At a meeting of the Samaritan Hospital staff Troy, Dr William L Hogeboom was elected chairman, Dr Herman C Gordinier secretary and Dr Thurman A Hull, radiographer

Report of State Hospital.—The sixth annual report of the State Hospital for the Cure of Crippled and Deformed Children at Treason Hill, near Haverstraw, for the year ended September, 1906, shows that on October 1 there were 45 patients receiving treatment in the hospital During the year 24 new patients were received, making a total of 69 patients treated

Long Island Physicians Meet.—At the ninth annual meeting of the Associated Physicians of Long Island, held January 19 in Brooklyn, Dr Arthur H Terry, Patchogue, was elected president, Drs Frank Overton, Patchogue, H Beckman, Delatour, Brooklyn and George K Meynen, Jamaica, vice presidents, Dr James C Hancock, Brooklyn, secretary (re elected), and Dr Charles B Bacon, Brooklyn, treasurer (re-elected)

Coroner's Report.—During 1906, 5,890 deaths were reported to the coroner's office of New York County, of which 2,160 were due to violence There were 549 felonious assaults causing death Surface cars caused 97 deaths, elevated trains 14, tunnel trains 17 and automobiles 24 The suicides of the year numbered 398, of which 110 were due to gunshot wounds, 21 to incised wounds of the throat, 51 to poison, 124 to gas asphyxiation, 27 to strangulation, 27 to jumping from windows or roofs, 4 to jumping in front of trains, and 34 to drowning The total number of deaths from accidents was 684 Alcoholism caused 115 deaths

Insanity on the Increase—The eighteenth annual report of the state commission on lunacy indicates a steady increase in insanity in the state The net increase in all institutions during the past year was 839 The whole number of new cases during the year was 5 761, slightly more than during the preceding year The total number of insane in all institutions at the close of the year was 28 302 of whom 960 were classed as criminals, and during the year 1 468 were discharged as cured. The commission makes a plea for nurses' homes on the grounds of the hospitals at Middletown Binghamton and Poughkeepsie An appropriation is asked for a site for a new hospital to replace that one on Ward's Island as the state's lease expires in six years Alien insane deported to Europe during the year were 169 in number The report favors the extension of the farm colonies in connection with existing hospitals

Personal.—Dr James W Putnam, Ivons has been designated local surgeon for the New York Central lines and Rochester Syracuse & Eastern Railroad——Drs Henry D White, Albert E Dietrich Samuel Millington, Howard T Teller, Dwight C Brogn, Nelson C Scudder and J Orlev Stranahan have been appointed ward physicians of Rome——Dr Charles L Low Pulaski, has retired from the practice of medicine to accept a position as heating and ventilating engineer and sanitary expert——Dr Allen T Leonard has been appointed city physician and Dr Frederick W Bentley a member of the Board of Health of North Tonawanda——Dr James F Walker, Hornell sailed for Europe January 6——Dr James G Hunt, Utica has been reappointed local surgeon of the New York Ontario and Western Railroad for the twenty third

consecutive year——Dr John Van Duyn, Syracuse, has been elected a director of the Onondaga Historical Association——Dr William C Doane, Elmira, has recovered after a severe illness——Dr John L. Bishop, Niagara Falls, has gone to New York City for treatment at the Pasteur Institute.——Dr C Floyd Burrows will succeed Dr Henry B Pratt as physician at the Syracuse City Hospital——Dr Charles Haase, Bath, will sail for Europe about April 1——Dr William W Hewlett, Babylon, who was operated on for nephritis January 30, at the Presbyterian Hospital is reported to be in a critical condition

San Francisco Relief Committee's Report.—The Relief Committee of the New York Academy of Medicine and the medical societies of the counties of New York and of Richmond was organized April 26, 1906 and elected Dr Charles L. Dana chairman, Dr John H. Huddleston, secretary and Dr Charles H. Richardson treasurer It issued appeals to the medical profession and was early aided by a gift of $5,000 from the New York Chamber of Commerce Aside from this gift 440 individual subscribers contributed $5,661 10 and 14 societies $2,040 The societies which contributed were as follows The Women's Medical Association of New York City, Quiz Medical Society, Metropolitan Medical Society, New York Society of Dermatology and Genitourinary Surgery, Harlem Medical Association, Medical Society of the County of New York, New York Academy of Medicine, German Medical Society of New York City, Eastern Medical Society of the City of New York, New York Society of Internal Medicine, Alumni Association of New York Hospital, Alumni Association of St. Luke's Hospital, Yonkers' Practitioners Society and Medical Union Society The total disbursements were $226 52 The amount from medical sources sent to San Francisco was $7,474.58

The Legislature.—Dr Alvah H Doty has again been appointed health officer of the port of New York by Governor Hughes In making the appointment the governor issued a statement showing how efficiently Dr Doty had discharged his duty and what valuable service he had rendered New York City and the entire country Dr Doty's appointment is for a term of four years.——Two anti "patent medicine" bills have been introduced into the legislature One prohibits practicing physicians from prescribing "patent medicines," the other requires "patent medicine" manufacturers to file with the state commissioner of health a statement of the name under which the medicine is sold and a formula specifying the ingredients and to print such formula on the labels of bottles——At a hearing on the osteopathy bill on February 7, Dr A F Bristol of Brooklyn, Dr Arthur S Root and Dr H. L. K. Shaw of Albany, appeared before the senate and assembly committee on public health and explained why the state medical society opposed the bill——Assemblyman Stern has introduced a bill compelling employers who conduct factories or shops in which machinery is used for manufacturing purposes to keep at all times medical and surgical chests for the use of employés——A pure food bill has been introduced which is the most comprehensive of its kind yet proposed It covers all food articles manufactured in the state. Delegates and representatives from all the pharmaceutical organizations and schools of the state met and discussed the subject of pure food legislation It was decided to support vigorously the measure prohibiting the sale of cocain in any compound or form except on the prescription of a physician——The assembly passed the G H Whitney bill prohibiting the sale of cocain and eucain, except on the prescription of a physician

Buffalo

Cold-Storage Food.—It has developed through correspondence carried on by Health Commissioner Wende with the health departments of other cities that no city has a cold storage ordinance stating the length of time that food may be held in cold storage and be fit to be sold for food. The corporation counsel recently drafted an ordinance bearing on this most important question, but Dr Wende has thus far withheld approving it until he has made a thorough investigation of the cold storage business He has appointed City Bacteriologist Bissell to proceed with the investigation. If true it is surprising, notwithstanding the immense amount of capital invested in cold storage plants, and the large amount of foodstuffs, meat, poultry, eggs, etc., which are stored for varying lengths of time before their consumption that no ordinances in any city are in effect governing the storage warehouses

New York City

Smallpox on Steamer.—The Fabre steamer, *Gallia*, which arrived January 26 from Mediterranean ports was detained at quarantine because of a case of smallpox on board

Ball for Benefit of Hospital.—The annual charity ball, which was given at the Waldorf Astoria on February 4 for the benefit of the Nursery and Child's Hospital, realized several thousand dollars for the institutions

More Medical Inspectors.—The health department has appointed 20 new medical inspectors of schools, 11 will be assigned to Brooklyn, 5 to Manhattan, 2 to the Bronx, and one each to Richmond and Queens

Personal.—Dr Henry C Coe has been appointed consulting surgeon to the Woman's Hospital in the City of New York——Dr Julius Jarcho was seriously injured January 20 by being struck in the eye with a snowball He is in grave danger of losing the sight of one eye

Money for Beth Israel Hospital.—At a dinner given by the board of directors and the medical staff of this institution it was announced that $21,000 had been contributed toward the hospital by guests, and it is expected that the annual Purim ball will net at least $20,000

Election.—The Brooklyn Medical Society has elected the following officers President Dr Hugh Edward Rogers, vice-president, Dr William H. Rankin, recording secretary Dr Alfred E Shipley, corresponding secretary, Dr Edward W Wright, treasurer, Dr Edwin A. Hatch, and librarian, Dr Lewis E. Meeker

Conference on Blindness.—The second conference of local charities, to be held on February 19, will be in the interests of the blind. There will be an exhibit of the variety of products of the industries of the blind, and Eben P Murford will speak on the industrial and educational training and employment for the blind

Alumni Meeting.—At the annual meeting and banquet of the Greater New York Alumni Association of the Albany Medical College, which was held January 24, Dr Walter C Gilday was elected president, Dr Frederick W Loughran, vice president, Dr Flavius Packer, secretary, and Dr George F Morris, treasurer

Problems of Insanity.—The third of a series of public lectures, arranged for by the Psychiatrical Society, at the Academy of Medicine was delivered by Dr Charles L Dana, on 'The Facts of Heredity and Their Relation to Mental Disorders" These lectures aim at placing before the medical profession and the general public facts with regard to mental disorders, which indicate the possibility and duty of initiating a movement towards general preventive measures

Contagious Diseases.—There were reported to the sanitary bureau for the week ended February 2, 354 cases of tuberculosis, with 206 deaths, 325 cases of scarlet fever, with 15 deaths, 315 cases of diphtheria, with 46 deaths, 138 cases of measles, with 5 deaths, 75 cases of whooping cough, with 13 deaths, 35 cases of typhoid fever, with 9 deaths, 20 cases of cerebrospinal meningitis, with 17 deaths, one case of smallpox, with one death, and 122 cases of varicella, a total of 1,385 cases and 312 deaths

To Instruct Teachers.—The Jewish Hospital for Deformities and Joint Diseases has just been opened under the direction of Dr Henry W Frauenthal The hospital is non sectarian and Dr Frauenthal plans in connection with the regular hospital work for a course of lectures to teachers, instructing them in the causes of this class of diseases, such as bad positions in school, the carrying of too many books, etc. He would also teach them to recognize the early symptoms of disease, so that the children may receive treatment during the early stages of the disease

Sale of Cocain.—On January 29 three men were fined in the Court of Special Sessions on the charge of violating the pharmaceutical law, by failing to put poison labels on bottles containing cocain Two of them were fined $100 each and the third $50——At a meeting of the Board of Health, January 30 the following important addition was made to the Sanitary Code "No cocain or salt of cocain either alone or in combination with other substances, shall be sold at retail by any person in the City of New York except upon the prescription of a physician."

Increase in Mortality.—The mortality for the week ended February 2 was considerably higher than for the corresponding week of last year For this year the number of deaths was 1 612, and for the preceding year 1,434 This increase was confined to adults. The death rate for children under 5 years of age was lower than for last year The chief cause of the increased mortality was the presence of influenza in a more fatal form than last year, affecting principally those of advanced years Pneumonia caused 49 more deaths than in the corresponding week of last year, Bright's disease 14 and tuberculosis 28

To Suppress Noise—At the first meeting of the board of directors of the newly formed Society for the Suppression of Unnecessary Noise it was decided that the first work of the society would be to suppress unnecessary noises in the vicinity of the local hospitals Word is to be sent to officials of car lines asking that the ringing of bells in the vicinity of hospitals be omitted Notices will be posted in the different automobile clubs asking the members to go at half speed and to refrain from the use of horns and siren whistles while passing hospitals An effort will also be made to do away with cobblestone pavements in front of hospitals

Demand Pasteurized Milk.—Since the report of the Royal Commission on Tuberculosis has announced that human and bovine tuberculosis are reciprocally communicable diseases, and that milk containing tubercle bacilli is frequently the cause of tuberculosis in man, public interest in the subject of pasteurization of milk has been reawakened The daily papers criticise the health commissioner for not taking more interest in securing a larger supply of pasteurized milk instead of endeavoring to purify the supply by inspecting dairies throughout the state This inspection must necessarily be ineffectual, and again, a large part of the supply of milk of this city comes from other states, over which our inspectors could have no authority It has been announced that about one half the cattle in this state, or about 300,000, are tuberculous The cost to the state of killing these cows is prohibitive and hence the only safe thing to do is to pasteurize the milk The department of parks took up this question last year and asked for $20,000 for the purpose of establishing pasteurized milk bureaus in the public parks They did not get the appropriation, though two booths were erected and supplied with pasteurized milk by private individuals As a result of the conference on the milk question held in this city last November, a permanent milk committee has been appointed for the purpose of assisting the health department. This committee consists of 38 members, all of whom took part in the conference last fall It has announced its plans and seems to favor an increase in the number of milk inspectors and an effort to secure clean milk rather than an attempt to pasteurize the entire supply It will endeavor to have the number of inspectors for the country increased to 80 and the number in the city increased by 50 It will also ask for more milk stations where pasteurized milk in bottles for babies may be distributed

OHIO

Portrait of Kinsman Presented.—On January 30 Dr David N Kinsman gave an address before the entire student body of the Ohio Medical University on "The True Physician" Dr Josiah Medberry on behalf of the faculty, presented to the Y M C A of the institution a portrait of Dr Kinsman.

Society Meeting—At the meeting of the Academy of Medicine of Toledo and Lucas County, held January 11, the following officers were elected President, Dr Walter H Snyder vice president, Dr Sidney D Foster, financial secretary, Dr Edwin D Tucker, corresponding secretary, Dr Nathan W Brown, treasurer, Dr John G Kellar, and censor, Dr Herbert E. Smead

Postgraduate Course—The Logan County Medical Society at its annual meeting, January 3, decided to establish a postgraduate course in accordance with the plan suggested by Dr J N McCormack The first meeting was held January 17 for the report of cases and presentation of patients and pathologic specimens The following officers were elected at the annual meeting of the society Dr Warren W Hamer, Bellefontaine president, Dr John S Montgomery, Huntsville, vice president and Dr Arthur J McCracken, Bellefontaine, secretary

Personal—Dr Louis Feid, Cincinnati, has been appointed jail physician——Dr Charles O Dunlap, McArthur has been appointed district surgeon of the Hocking Valley Railroad——Dr John B Ury, Defiance has resigned as clerk of the board of public safety——Dr Elmer G Horton, Columbus, has been appointed city health officer——Dr Mary L. Austin has been placed in charge of the female department of the Ohio Home for Epileptics Gallipolis——Dr Charles Wittenmyer, Arcanum, has been succeeded as coroner of Darke County by Dr John E. Monger Gettysburg——Dr George R. Schuster, Dayton has succeeded Dr Walter L. Kline as coroner of Montgomery County——Dr and Mrs. Henry F Weis, Dayton celebrated their golden wedding anniversary January 8——Dr John D Westrick has been elected health officer of Defiance——Dr William H Taylor for 40 years obstetrician to the Cincinnati Hospital has resigned and Dr William D Porter has been appointed as his successor——Dr Henry J Austin, Geneva has succeeded Dr George L. Webster Kingsville as coroner of Ashtabula County——Dr Julius H Jacobson has been reappointed surgeon in charge of the Infirmary Hospital, Toledo——Dr Elmer S. Protzman, Kenton, has succeeded Dr Frank D Bain as surgeon for the Toledo & Ohio Central Railroad——Dr and Mrs Charles F Cushing, Elyria have gone to Florida for the remainder of the winter——Dr Morton W Bland, Bellevue, has been sworn in as coroner of Huron County——Dr Herbert R Pearson and family, West Milton have gone to Port Orange, Fla., for the winter——Dr Charles W Stoughton, Croton has been appointed postmaster of that place——Dr Milo Wilson, assistant physician at the Athens State Hospital, has resigned and will enter private practice——Dr Joseph P Baker has been elected president, and Dr Charles W Benedict, clerk, of the Findlay board of health——Dr Jacob A Stout has been appointed a member of the board of health of Columbus, to succeed Dr James U Barnhill term expired——Dr A Per Lee Pease Massillon, who is taking a trip to the Pacific Islands, was at Pago Pago January 12.——Dr William Graefe has been appointed examining surgeon by the civil service commission for the Sandusky district

PENNSYLVANIA

Academy Election.—At the annual meeting of the Harrisburg Academy of Medicine, January 25, the following officers were elected President, Dr John F Culp, vice president Dr William E Wright secretary, Dr Clarence R Phillips, treasurer Dr Harvey F Smith, librarian, Dr Thomas S Blair and trustee, Dr David S Funk

Communicable Diseases—Scarlet fever of mild type is reported to be prevalent at the Pennsylvania Military College, Chester——Scarlet fever is reported to be epidemic at Roaring Spring, where 12 cases have been reported——The board of health of Kittanning has issued a proclamation advising citizens to boil all water for drinking and domestic purposes on account of the prevalence of scarlet fever and other ailments

Vaccination—A bill has been introduced in the legislature which provides that the school boards shall have the exclusive right to determine whether or not children qualified for admission to schools in the district shall be vaccinated before being enrolled No board, however, shall require vaccination of any pupil, should such pupil present a physician's certificate that the physical condition of said pupil will not permit the procedure Should there be a smallpox epidemic, or danger of one, the school board may adopt such preventive measures as to compulsory vaccination, as it may deem fit Any school director parent guardian or person violating any of the provision of the act shall be liable to a fine of from $5 to $1,000 provided that vaccination of children whose parents can not pay for the same, must be performed at the expense of the school district

School for Feeble-Minded Overcrowded—The legislative lunacy commission visited the Pennsylvania Training School for Feeble minded Children, Elwyn, last week The members learned that the institution is overcrowded and that there is need of a hospital to treat a large percentage of inmates who are incurable consumptives Many additions to the present buildings will be required if the number of patients is not lessened Dr Martin W Barr, the superintendent conducted the commission through the buildings pointing out the improvements needed He said that of the 1 088 inmates 75 per cent. suffer with tuberculosis in some form and that he has absolutely no place to treat 60 patients who are incurable that it would cost about $35 000 to construct such a hospital and he pleaded for the appropriation of such a sum He also said that the institution is being crowded with criminal insane who should not be sent there

Personal.—Drs Franklin Massey and Franklin L Sallade have been appointed members of the board of health of Womelsdorf——Dr Isaac S Graves Jermyn, slipped and fell January 13 breaking his wrist——Dr John H Twitmeyer Sharpsville slipped and fell at Shenango Furnaces January 17 breaking his nose——Dr Thomas M Livingstone has been elected president of the Columbia College of Physicians and Surgeons vice Dr Jacob L Ziegler Mount Joy deceased——Dr Haines L Crothers Chester who has been ill has recovered——Dr Frank B Statler Johnstown has been appointed captain and assistant surgeon N G Pa and assigned to duty with the Fifth Infantry——Dr J Chester Wolfe Ridley Park sustained severe burns of the hands and face while lighting a gas radiator at his house January 28——Dr S B Koser Mountville, while driving across the Pennsylvania Railroad tracks at that place was struck by a [illegible] and [illegible] injured William F Wright as [illegible] State

Hospital, Harrisburg, has resigned and will engage in private practice——Dr. Warren Z. Anders, Trappe, is ill at the home of his parents with scarlet fever.

Typhoid Fever.—The officials of the State Board of Health have been notified of the conditions that exist at Martin's Creek, near Easton, where 12 cases of typhoid fever have developed within a few days. The waters of the Delaware River are reported to be polluted by the drainage from the infected district. There was a serious outbreak of the fever at the same place a year ago, when the state authorities compelled the cement companies to remedy the evils. This time, however, the trouble is said to exist on premises owned by the Howell estate, where foreigners rent shacks——Between 30 and 40 cases of typhoid fever are reported in Huntingdon, where four deaths have occurred, and much alarm is felt. An expert has been summoned to examine the water. The water supply of Huntingdon is pumped from Stone Creek, just east of the town. It has been the main supply for many years. Despite the fact that the water is supposed to be filtered before it is sent through the mains from a pumping station it is thought to be the cause of the epidemic. There are three school buildings in Huntingdon, all of which are supplied with water from Stone Creek. The water supply has been shut off and 1,500 children are carrying boiled water, milk, coffee and other beverages to school in bottles.

Philadelphia

Bequests.—By the will of Martha J. Moore $250 was left to the Pennsylvania Hospital for the Insane——The will of Martha E. Kortright devises $25,000 to the Presbyterian Hospital.

Society.—The alumni and undergraduates of the Medico Chirurgical Hospital have organized a social club, of which Dr. Benjamin F. Devitt has been chosen president, and Dr. Harry A. Duncan, secretary and treasurer.

Schott in Philadelphia.—Dr. Theodore Schott, Bad Nauheim, Germany, whose visits to other cities have been mentioned in THE JOURNAL, also visited Philadelphia last week as the guest of Dr. S. Lewis Ziegler. On Wednesday he spoke before the College of Physicians on treatment of chronic diseases of the heart. On Thursday a luncheon was given by Dr. S. Solis Cohen following which Dr. Schott spoke at the University of Pennsylvania on "Chronic Muscular Disease of the Heart," and in the evening was the guest of honor at a dinner given by Dr. James Tyson. On Friday he lectured for Dr. James M. Anders at the Medico Chirurgical College on the "Pathology and Therapeutics of Angina Pectoris," and in the afternoon at Jefferson Medical College for Dr. James C. Wilson on "Acute Overtaxing of the Heart." In the evening he was the guest Dr. Anders at dinner at the Union League Club.

Elections.—The Philadelphia County Medical Society has elected the following officers: President, Dr. James B. Walker, vice presidents Drs. William S. Newcomet, Joseph M. O'Malley, Wendell Reber, Robert H. Chase, Morris J. Karpeles, Franklin Brady and William S. Wray, secretary, Dr. Ross H. Skillern; treasurer, Dr. Collier L. Bower, censor, Dr. Charles A. E. Codman and district censor for the Medical Society of the State of Pennsylvania, Dr. Albert M. Eaton. In the future the Northeast Branch of the Philadelphia County Medical Society will hold its meetings in the newly finished Frankford Branch Auditorium of Philadelphia's free library system. The election of officers and committees to serve for 1907 resulted as follows: Dr. W. E. K. Wurcel, chairman, Dr. William Harmar Good, clerk; committee on scientific business, Drs. Albert C. Buckley, William H. Morrison, S. Reughley and W. Harmar Good, and committee on increase of membership, Drs. Bover, George C. Hanna and E. A. Drake——The sections of general medicine of the College of Physicians at its January meeting elected the following officers to serve during 1907: Dr. Aloysius O. J. Kelly, chairman, and Dr. George W. Norris, clerk.

SOUTH DAKOTA.

Societies Elect Officers.—At the annual meeting of the Aberdeen District Medical Society held January 16 the following officers were elected: President, Dr. C. E. McCauley, Aberdeen, vice president Dr. W. M. Edgerton, Faulkton; secretary, Dr. E. J. Clemons, Aberdeen, treasurer, Dr. M. C. Johnston, Aberdeen; censor, Dr. J. D. Jones, Groton——At the annual meeting of the Yankton District Medical Society the following officers were elected: President, Dr. J. Roane, Yankton; vice president, Dr. F. A. Swezey, Wakonda; secretary and treasurer, Dr. J. L. Stewart, Irene, delegate, Dr. S. M. Hohf, Yankton; censor, Dr. E. M. Morehouse, Yankton.

VIRGINIA

Physicians Acquitted.—Drs. McMinn M. Pearson and Joseph H. Delaney, Bristol, who had been charged with malpractice by J. M. Bevans and wife, Johnson City, Tenn., who sought damages of $10,000, were acquitted January 22.

Society Election.—At a meeting of the Patrick Henry Medical Society, held in Martinsvile, January 14, Dr. Benton F. Tatum, Stuart, was elected president, Dr. Robert R. Lee, Martinsville, vice president, and Dr. J. Russell Perkins, Spencer, secretary.

Contagious Diseases.—The health board of Hanover County met in Atlee, January 28, and decided to establish a rigorous individual quarantine and to enforce vaccination. Dr. Gray was appointed special health officer, with full power to quarantine and vaccinate whenever necessary.

McCormack in Virginia.—Dr. J. N. McCormack will address the students of the Medical College of Richmond at 1 o'clock, the general medical profession at 5 o'clock, and the public at 8 30 o'clock, March 2. At the public lecture Dr. McCormack will be introduced by the governor of Virginia.

Proposed Law in Indiana, Not Virginia.—In THE JOURNAL, January 19, a news item concerning proposed health regulations in Indiana was, by mistake, credited to Virginia. We understand that no such legislation is proposed in Virginia, but that the bill referred to has been prepared by the State Board of Health of Indiana.

Personal.—Dr. Stark A. Sutton, Norfolk, has resigned as lieutenant and assistant surgeon of the Seventy first Infantry——Dr. Robert R. Robertson, Portsmouth, has been appointed as jail physician, vice Dr. Charles L. Culpepper, deceased——Dr. J. Richard Adams, Blackstone, has been appointed physician of Nottoway County, vice Dr. Algernon S. Epes, deceased——Dr. William G. Fox, surgeon at the Home Hospital, Hampton, has resigned, to take effect February 17.

GENERAL

Major Kean's Work on Cuban Yellow Fever.—Major J. R. Kean, surgeon, U. S. Army, who was sent to Cuba at the beginning of the recent American occupation for special duty with the department of health, is making a flying visit to Washington. When it was found, on the arrival of American troops, that yellow fever was again prevailing in Cuba, Major Kean, who had taken such an active part in the suppression of that disease in the previous occupation, was put in practical charge of the situation and, by virtue of his intelligent and active measures, soon had the disease under control. Since January 7 no case of yellow fever has been reported in Cuba and, while a sporadic case may be expected to develop occasionally, Major Kean does not expect any spread of the disease. There has not been a single case among the enlisted force and only one among the officers of the American troops.

CANADA

Canadian Association for the Prevention of Tuberculosis.—The annual meeting of this association will be held at Ottawa, March 13 14. Dr. Charles Sheard, medical health officer of Toronto, and chairman of the Ontario Board of Health will deliver a public address on "The Home Treatment of Tuberculosis."

Canadian Nobel Prizes.—By the will of the late A. Mc. Charles, a prospector of Sudbury, Ont., the University of Toronto has received $10 000 in Ontario government bonds, which is to be used in giving prizes on a small scale similar to the Nobel plan. Two clauses interest medical men. A prize is to be given for any important discovery, invention or development by any Canadian which will lessen the dangers and loss of life in connection with the use of electricity in supplying power and light, and another for any marked public distinction achieved by any Canadian in scientific research in any useful and practical line.

Medical Legislation.—The Canadian Press Association, just in session in Toronto attacked the Ontario Medical Council and other bodies composed of "irresponsible" men. The association will ask the legislature to amend the Ontario medical act——A bill has been entered in the Quebec legislature to amend the law respecting physicians and surgeons by which it is proposed to extend the medical course from four to five years and better to define what constitutes the illegal practice of medicine. It will also seek to define better the powers of the medical council to discipline members and to permit of the board or the College of Physicians and Surgeons giving grants to medical societies.

Money for Hospitals—When the special committee toward erecting a tuberculosis sanatorium in Manitoba has collected $5,000 the provincial government has promised to donate $25,000——A nurses' residence has been opened in connection with the Sick Children's Hospital, Toronto The building was the gift of Mr John Roos Robertson, Toronto, proprietor of the *Evening Telegram*, who has been very generous to this institution. The building cost $130,000——The Ontario government will establish cottage hospitals or rural colonies for dealing with patients afflicted with mental delusions——The Isolation Hospital and Nurses' Home in connection with the Vancouver General Hospital is now completed——The nurses' home in connection with the Winnipeg General Hospital was formally opened February 1——Wingham, Ont, has a new hospital.

Personal.—Dr George R McDonagh, Toronto, has gone to Egypt——Dr Loir, a pupil and nephew of Pasteur, and a graduate of the medical faculty of Paris, has been appointed to the chair of biology in Laval University, Montreal——Dr John Malloch, Toronto, who has been in England the past two years and was recently admitted F R C S England, has been appointed pathologist to Victoria Park Hospital, London, Eng——Dr D A L Graham has been appointed assistant pathologist at the Toronto General Hospital, to assist Dr A H Caulfield, who has gone to England for graduate work——Dr R B Burwell has been appointed clinical pathologist to the Toronto General Hospital——Dr John Stewart, Halifax after visiting in Toronto recently, went to Bermuda for his health——Dr Harry Watson, Winnipeg, Man, who a few years ago practiced in Ottumwa, Iowa, and then was in the Philippines with the United States Army as surgeon, is seriously ill in St Boniface Hospital, Winnipeg——Dr H A Wright's office and home at Oak Lake, Man was recently destroyed by fire——Dr Cluff, Winnipeg, has been appointed resident pathologist at St Boniface Hospital Winnipeg——Dr L S McKid, Calgary, Albt is studying abroad——Dr George McDonald, Calgary has been taking graduate work in New York——Dr J B Chambers Minto, Man, has been appointed assistant superintendent to the Hospital for the Insane at Brandon, Man

FOREIGN

Death of Greek Medical Centenarian—Our exchanges report the death at Athens of A Maryoveni M.D, at the age of 111

Medical Men Arrested in Russia—According to the official organ of the National Russian Medical Association 972 physicians had been arrested for participating in the revolutionary movement, up to November, 1906, and since then a number of arrests have been made

Sixth German Congress of Orthopedic Surgery—This congress will be held in Berlin, commencing April 2, the day before the German Surgical Congress convenes at the same place For further particulars apply to Dr Joachimsthal, Magdeburgerstrasse 36, Berlin W

Seventh International Congress for Physiology—This congress will meet at Heidelberg Aug 13 16, 1907, with Prof A Kossel in the chair An exposition of scientific apparatus will be held in connection Address all communications to the Physiologische Institut, Heidelberg Germany

Congress of Stomatology—The first French Congress of Stomatology will take place in Paris Aug 1 5, 1907, and will be open to all doctors of medicine who are interested in dental and oral science For further particulars one may address the general secretary, Dr Chompert, 182 rue de Rivoli, Paris

Stipends for Medical Students—An endowment fund has recently been bequeathed to the Odessa University to aid worthy students with an annual stipend of 1,000 roubles, about $500 each The testator stipulated that the amount must be as large as this, as no student can devote himself entirely to science unless his material wants are fully provided for

Honors for Danish Physicians from Outside Their Own Land.—During 1906 for his cancer researches, C O Jensen received the Walker prize the first time it was awarded S M Jorgensen received the Lavoisier and Berthelot medals for his research on the ammonia compounds, and A Krogh the Seegen prize for his work on the elimination of nitrogen in the respiration

Proposed Memorial to Semmelweis at Vienna—A committee has been appointed by the Vienna medical councils to collect subscriptions to erect a memorial to Semmelweis at Vienna The appeal issued by the committee is over the signatures of Regnier, Dirmoser and Savor Vienna was the principal scene of his labors and witnessed what he called the "rising of the puerperal sun"

International Medical Study Trip—The "international medical excursion" for 1907 will start from Paris in August and visit the health resorts of Austria, Hungary and southern Germany The office of the organizer of the trips is at Paris, rue de Rivoli 184

Five Million Dollars for Paris Pasteur Institute—A cable despatch announces that the will of the late multimillionaire of Paris, Daniel Osiris, who died February 4, bequeathes $5,000,000 to the Paris Pasteur Institute Osiris has given many gifts to science and the public before, and in 1890 presented to the nation Malmaison, the historic residence of the Empress Josephine from 1789 to 1814

Private Gift of Clinic for Cutaneous Affections at St. Petersburg—A local merchant has built and equipped at an expense of about $200 000, a modern clinic for cutaneous diseases and syphilis, with laboratory etc for experimental research The endowment provides that 10 of the total 30 beds are free Ssolowjew is in charge of the clinic which is connected with the Institute for Experimental Medicine

Course of Lectures in Medical Pedagogy—A group of Paris internes have organized a course of elementary practical medical pedagogy in medicine, surgery, children's diseases, gynecology, cutaneous affections and syphilis Each course comprises ten lessons and the price is 20 francs ($4) Bord interne at the Broca hospital has charge of the registration, the number of attendants at each course being limited

Physicians in the Spanish Cabinet.—Another one of the three editor of the *Siglo Medico*, Madrid, has been appointed to an important political position, O Angel Pulido as sub secretary of state Another physician, G Cabanas, has just been made minister of public instruction One of his first acts was the appointment of two commitees to further the progress of education in the schools and colleges Each committee includes a number of physicians, Ramon y Cajal, Cortezo, San Martin and others

Repression of Venereal Disease—The German Society for Repression of Venereal Disease intends to discuss the question of sexual pedagogies at its next congress, to be held at Mannheim, May 24-25, 1907 The subject will be studied in all its bearings, with addresses by teachers of both sexes, by physicians, by mothers etc Foerster of Zurich author of Jugendlehre, will open the discussion Hellpach of Carlsruhe will deliver the address on "Sexual Dietetics," and Kemsies of Weissensee, the address on "Enlightenment of the Pupils in the High Schools and Colleges"

Chair of Medical Parasitology at Paris—One of the oldest chairs in the medical school at Paris is that of medical natural history Originally devoted mainly to botany, the trend of the times has given parasitology paramount importance, and the title has now been changed to the chair of medical parasitology and natural history Prof R. Blanchard has been the incumbent since 1897, and founded the *Archives de Parasitologie*, now in its second volume He also established the Institut de Médecine colonial, which has just closed its fifth course of lectures It has awarded a total of 133 diplomas About half the students are foreigners, mostly from Spanish America

Acquittal of Dealer Sued for Selling "Ear Spectacles" Under False Pretenses—The German boards of health at some places have warned against the extravagant claims for the electric ear spectacles put on the market by a London firm Suit was instituted against a Berlin merchant who sold them and experts testified that the ear spectacles were solely designed to bleed the public, without any therapeutic value from the weak galvanic current generated by the few small sheets of zinc and copper in the apparatus The court expert, however, declared that the apparatus might possibly have some action as a hydrotherapeutic measure owing to the moist applications to the ears, and it also might benefit by suggestion The defendant as a layman had no opportunity nor cause to pass on the merits of the apparatus, but merely acted as the middle man The suit against him was consequently dismissed

Suits Against a Physician for Mistake in Prescription—A German physician ordered instillation of a 50 per cent solution of silver nitrate in the eyes of a newborn infant who e mother he was attending He gave a prescription to this effect, and this strong concentration was used The resulting inflammation was finally controlled by a specialist but vision in one eye is permanen' The accused ascribed his mistake to u \ onal worl a the time The court ... ing circumstances and a fine of $ ... of 1 child is now suing the pa

Becquerel of Paris Receives the Helmholtz Medal.—The German Academy of Sciences has presented the Helmholtz medal this year to Henry Becquerel, the French scientist who discovered the Becquerel rays One of the Nobel prizes in 1903 was divided between him and the Curies

LONDON LETTER.

(From Our Regular Correspondent)

LONDON, Feb 2, 1907

"Patent Medicines" in Great Britain

Americans have the reputation—undoubtedly well deserved—of being the largest consumers in the world of "patent" and proprietary medicines and of nostrums of every description The quantity of so called remedies for all diseases under the sun, which are voraciously, nay, cheerfully swallowed by members of the great American public yearly, is, in the words of Dominie Sampson, "prodiguous" Warnings that a goodly proportion of many of the widely advertised cure-alls are more calculated to wreak harm than to do good has had little effect. But although America can lay claim to the proud position of easily leading the world, both in the manufacture and consumption of nostrums, Great Britain has no rival for the second place, unless it be Canada The sale of "patent medicines" in Great Britain had advanced by leaps and bounds It has recently been announced that the sum paid by the British public for "patent medicines" in the year ended March 31, 1906, was $15,633,400 Some patriotic Englishmen who wish to excuse their countrymen for the contraction of the "patent medicine" habit, say that it is chiefly due to the insidious wiles of the American nostrum vendor and advertiser Whatever may be the cause, and there can be but little doubt that American "patent medicines" and American methods of advertising have made great headway in Great Britain of late, the fact remains that the people of Great Britain have developed an ever increasing tendency to consume remedies of every kind Perhaps this may be one of the reasons for the much to be deplored physical and mental degeneration of the young in Great Britain

Bioplasm in Great Britain.

Bioplasm is by no means unknown in Great Britain although it must be said that the product has made but little headway among the British consumers of patent medicines It may, however, be instructive for the readers of THE JOURNAL to learn of the *modus operandi* in Great Britain of the firm which controls bioplasm The methods are very similar to those employed in the United States Some time ago, an advertisement appeared in the "Agony" column of the London *Times* of much the same tenor as that which was copied in THE JOURNAL The advertisement purported to emanate from Mr G P Burnham, Delmar, N Y When this gentleman was written to, a lengthy account of the manner in which he had been cured of locomotor ataxia in an advanced stage was received It was also added that Mr Burnham gave all particulars of his case and cure from purely philanthropic motives, but that if any user of bioplasm who employed it by Mr Burnham's recommendation derived benefit therefrom, such a person might send a subscription which would be devoted to making known far and wide this marvelous remedy Afterward a flood of circulars, etc was received from the Bioplasm company

Feeding of School Children in England.

The provision of meals bill has become law in England This bill provides that all poor children whose parents state that they can not afford to give their children proper meals will be fed at the public expense The act, however, must be adopted by a local authority before it can come into force The question of the mental and physical deterioration of the English race, and especially of the rising generation of the towns, has been exciting much alarm within the past few years It is acknowledged that the town bred children of Great Britain have deteriorated, and lack of proper food has been pointed out as one of the main causes The bill recently passed, however, has provoked much severe criticism It is claimed that to absolve parents from the responsibility of feeding their offspring, must in many instances lead to grave abuses The question is well summed up as follows 1 Want of food is one of the least important of the causes of distress, and in London and generally through the country, so far as it exists, it is met and adequately dealt with by private charity 2 The unsatisfactory physical condition of a proportion of school children arises from causes in operation before school age is reached, causes which would be untouched by the proposed measure 3 Experiments both in England and in Paris (*cantines scolaires*) have shown that the system is both expensive and unsatisfactory It is asserted, in short, that the measure will encourage and perpetuate parental neglect, selfishness, and ignorance, which are now the principal causes of children's distress, and will do so at the cost of those who are now performing their duty to their children and to the state.

Leprosy in Cape Colony

The alarming increase of leprosy in South Africa has been described in a previous letter In connection with this subject Dr Sutherland Black, formerly superintendent of the great leper establishment at Robben Island, read an important paper at the Polyclinic entitled, "The Prevalence of Leprosy in Cape Colony, and Some of Its Problems" Dr Black described the attitude of the government as one of anxiety and perplexity, due to doubts surrounding some of the elementary problems of the disease. At Robben Island there are now 600 inmates and nearly as many more in another asylum for natives In addition it is calculated that there is a nearly equal number of lepers at large, for whom there is at present no accommodation The authorities have now to face a great increase of the disease in Cape Colony With regard to the asylums Dr Black stated that there is need of more systematic treatment, of proper organization of the patients' labor and of hygienic improvements in the buildings The death rate of the inmates from tuberculosis has been excessive He found that the nodular variety of leprosy is more common among the whites than among the natives During the seven years he spent at Robben Island he tried many drugs and obtained some good results from creosote, but found most advantage from chaulmoogra oil in considerable doses He thinks that the disease is infectious only during the existence of nasal ulceration After this stage has passed he suggested that there is no necessity for segregation In the discussion which followed Mr Hutchinson said that for twelve years the Cape Government had enforced the segregation of lepers and nowhere else had the law been carried out with such vigor and consistency But this experiment in segregation has been an utter failure Leprosy spontaneously died out in the middle ages—a result which would have been impossible if it were a contagious disease Segregation should be abolished, he said and more sensible measures adopted Though thoroughly well conducted and though everything possible is done for the lepers at Robben Island the establishment is a prison and the high death rate from tuberculosis is due, he declared to the state of utter hopelessness engendered in the unfortunate "prisoners" by the utterly unnecessary and useless procedure of segregation

Changes in Meat Essences Kept in Tin

A large consignment of tins of beef essence prepared several years ago and sent to South Africa during the war, being no longer required by the army, was sold and recently returned to Great Britain They were found to differ from new samples, being fluid and discolored although sterile The changes were found to be due to metallic contamination, the essence having absorbed tin from its receptacle Metallic tin was present in amounts between 0 02 and 0 03 per cent (between 1½ and 2 gr per pound) The bacteriologist thought that this amount might produce symptoms of acute poisoning In invalids or in prolonged use even the minutest amount of metallic impurity would be objectionable It was suggested that the solvent action on the tin was due to the presence of organic acids, such as lactic and carnic acids

Report on Anthrax.

The first annual report of the anthrax investigation board for Bradford has been issued This board consists of representatives of the employers and work people engaged in wool combing, spinning and manufacturing hair wool and alpaca With the help of Dr Eurich as bacteriologic expert they have arrived at some important conclusions as to infection of workers During the first year of existence of this board 17 cases of anthrax were reported to them, of which 4 were doubtful Out of the remaining 13, 7—all in persons over 40—were fatal, and 6—all in persons under 33—ended in recovery Of the former all the patients but one suffered from internal anthrax, while the latter all had the disease in external form All the patients, except the abnormal one mentioned, contracted the disease during the preliminary operations of handling the materials, principally before they had been washed The most dangerous materials were found to be Persian wool, camel hair and some kinds of mohair The board recommends that certain dangerous kinds of work shall be scheduled and the materials only combed under the supervision of a government inspector

Pharmacology

THE AMERICAN DRUGGISTS SYNDICATE

An Organization for Appropriating and Dispensing Physicians' Prescriptions

While the legal status of the prescription may be unsettled, it would be claimed by few, we think, that the druggist had any legal or moral right to its use in counter prescribing This, however, is the avowed *raison d'être* for a druggists' combine calling itself the American Druggists Syndicate, or, as it is more euphoniously known to the "trade," the A. D S

This concern, which brazenly announces that it is dispensing physician's prescriptions in ready made packages, for the alleviation of all the ills that flesh is heir to, has the official sanction of that self proclaimed friend of the medical profession, the National Association of Retail Druggists Mr Jacob Diner, a member of the executive committee of the N A R. D, only recently placed the seal of his approval on the combination in an interview reported in the *Apothecary*, and by becoming a stockholder in the concern When first organized, the syndicate was under the ban of suspicion and was looked on with misgiving by the National Association of Retail Druggists This distrust, however, did not arise from any shock to the ethical conscience of the association, but simply because of a faulty "serial numbering" plan This plan, it should be explained, is a means adopted by the manufacturers for the tracing of any package sold below the contract price, each package sent from the factory bearing its definite serial number, this prevents the "cut rate evil" of which so many large department stores are guilty When this moral delinquency had been remedied, the A. D S was received with open arms and at once became, so to speak, a member in good standing

While the fate of the syndicate was in the balance, waiting for approval of the N A R D, it got out a magazine with the high sounding title of *"The Voice of the Retail Druggist"* This journal, which, bogey man like, was to frighten the N A. R D into submission, was edited by J B Duble, ex chief organizer of the N A R D and had two issues, more correctly *one* issue for the first issue had a very limited circulation By this time, the National Association of Retail Druggists, for reasons unknown but easily guessed, had reconsidered its attitude and given official recognition to the American Druggists Syndicate Since then the *"Voice"* has become aphonic and its worthy editor has become field representative of the *Apothecary*, which magazine has taken a graceful tumble from an attitude of vituperative abuse to one of smiling acquiescence.

Whether the remarkable change of heart that has occurred is due in any way to the fact that, at its first annual meeting, the syndicate announced a gross profit of $62,000 and declared a 20 per cent annual dividend to be paid quarterly, we may never know Remembering, however, that nothing succeeds like success, we may venture the opinion that it probably is

The reported founder of the A D S is a Mr C H. Goddard, an advertising man, who went east about a year ago to organize this company of which he is now secretary The first men to become interested in this concern were the dissatisfied stockholders of the Rexall Company, of "Vinol" fame At the time the N A R. D was opposed to the syndicate Mr Goddard was given an opportunity to "be good" by the Metropolitan Association of Retail Druggists of New York City This opportunity he "turned down" and when before the association's committee he told them point blank that within a year they would be handling his goods This prophecy has been fulfilled While before the committee he was asked by Mr Diner, the chief inquisitor, whose conversion we have mentioned, if the advertising claims of the syndicate were not a representation to the public that druggists were in the habit of stealing their formulas from physicians Mr Goddard admitted this and also that druggists steal formulas

The advertising referred to is a pamphlet they distributed widely, especially on the Pacific coast, in which several common ailments are considered under their appropriate headings For example, for headache—specific term'—two prescriptions are given written in full, with the statement that while these are good, nay, *excellent*, the *best* prescription is that put up by them in a "ready made package and marked Rx 1000, A D S Headache Wafers," (we may note here, parenthetically, that each wafer contains 4 grains of acetanilid,) "they cure where all others have failed" Have you dyspepsia? The "worst forms are *relieved* by these"—and here follow two ordinary pepsin mixtures—"but instantaneous *results* are secured and a permanent cure effected in many cases by taking Rx 1000, A D S, Digestive Tablets A thousand druggists guarantee it." And more to the same effect

ITS MEANING

What does the whole scheme mean? Simply this, that a few of the prominent retail druggists after selling for years the various nostrums on the market, have decided that it will be more profitable if they themselves go into the "patent medicine" business and thus participate in the gigantic profits accruing from humbugging the public. It means that they use, or deceive the public into thinking they use, the physicians' prescription as the basis for their products It also means, that the National Association of Retail Druggists is playing with the physician a "heads I win, tails you lose' game, and that while vowing friendship for the profession in public, it goes hand in glove with those interests most strongly inimical, not only to medicine, but to public health It means in short that the N A R D puts its official stamp of approval on the nefarious nostrum evil and by so doing becomes an aider and abetter in the continuance of an abuse that the better class of pharmacists, the medical profession, and the public have been earnestly striving to eradicate

ITS PERSONNEL.

The officers of this syndicate, aside from its advertiser publisher promoter secretary, Goddard, are all either druggists or are financially interested in the drug trade The president is George Ramsey, who is also general manager and vice president of the Hegeman corporation that has seven large drug stores at the following places in New York City 200 Broadway, 205 Broadway, 200 W One Hundred and Twentyfifth Street, 1917 Amsterdam Avenue, Third Avenue and One Hundred and Forty ninth Street and in the *Times* Building at Broadway and Thirty ninth Street R Scherick, the first vice president, is president of the Scherick Drug Company of New York City with two large stores at 487 and 525 Broadway, respectively, and at 525 Park Avenue The second vice president is Dr William C Anderson, dean of the Brooklyn College of Pharmacy, former president of the N A R. D, and a member of the American Pharmaceutical Association His pharmacy is situated at 320 Lafayette Avenue, Brooklyn George W Hackenburger, the third vice-president, is general manager of the Miner Drug Company, which operates the Original Bowery Pharmacy and a store at 112 E One Hundred and Twenty fifth Street. On the board of directors we find Charles Huhn of 98 Western Street, Minneapolis, Edward A Hays, at Middle and Free Streets, Portland, Maine, F A Davidson of Boston, the principal owner and manager of the Theodore Metcalf Company of Boston, E C Kinsel, with a drug store at 26 Michigan Avenue, Detroit, E L Weston, secretary of the Syracuse (N Y), Retail Druggists' Association, with a store at 111 N Salina Street, Syracuse, Otto C Hottinger, of the Hottinger Drug and Truss Company, Chicago C A Codman, manager of the Standard Drug Company of Cleveland, Ohio, with stores at Perry and Prospect, Cedar and Vienna, and Erie and Superior Streets respectively, and C S Roberts of Syracuse, N Y

"THE TRANSATLANTIC QUACK."

Further Remarks on Nostrum Advertising in Religious Papers

Strikingly apropos of the article on "Nostrum Advertising in Religious Papers," in THE JOURNAL, February 2, comes a voice from across the Atlantic in the form of an article in the *British Medical Journal*, January 26 The article is headed "The Transatlantic Quack." Surely every loyal American citizen must feel a glow of honest pride on reading the opinion, held in British professional circles of American business methods The writer says

Many hard things have been said about American business ways, but nothing puts them in a more despicable light than the letters addressed by so-called companies carrying on a medical business in this country in the name of American quacks. One of the most repulsive of these purports to be sent out by the Theo Noel Company Limited, dating from 29 Ludgate Hill London E C, whose vice-chairman is said to be J R Noel M.D and is addressed to clergymen The merits of the company s nostrum called Vitæ-Ore are heralded in this style Is it not a fact that sickness among the members of your congregation is a great hindrance to your plan and work? Do you not often wish that, like the Great Physician, you could heal the body as well as minister to the soul? You may be tempted to throw this letter down and conclude that we are talking cant for business purposes." [The writer of this circular anticipates, with marvelous clearness, the effect produced on any intelligent reader by his composition] We admit we are talking business, but what is the use of preaching that Christianity is applicable to all conditions of business life if as soon as a Christian business man refers to Divine things, he is set down as a charlatan talking cant?

Then follows an offer to supply, gratis, packets of "Nature s tonic and healer to be paid for one month from receipt, only if benefit has been derived from them 'in the hope to benefit some of these poor persons and thus set them talking about Vitæ-Ore.' The writer boasts of the number of church ministers who have availed themselves of this offer and of the editors of the leading medical religious newspapers who have endorsed the claims of the company s remedy

As shown in the cut printed in THE JOURNAL,* the *Cumberland Presbyterian* (issued weekly by the Cumberland Presbyterian Publishing Union) advocates the "Peace, Unity and Purity of the Church" on the front cover and Vitæ Ore on the back The English branch of the Theo Noel Company asks English clergymen to use its nostrum, so that "like the Great Physician, you can heal the body as well as minister to the soul," and when a minister of the Cumberland Presbyterian church remonstrates against the prostitution of the pages of his paper, the Rev James E Clarke, editor, replies that it is "hardly the function of such a paper as the *Cumberland Presbyterian* to decide questions in accordance with any professional code of ethics," while the manager writes that "the very papers which, with axes to grind which other papers understand, are leading the crusade against 'patent medicines' are carrying in their columns at the same time lies galore, setting forth other wares"

Is one to conclude, from this specimen of ecclesiastical logic, that the argument of the management of the *Cumberland Presbyterian* is that since all advertising is founded on fraud, there is no reason why their paper should not derive as much profit as possible from such conditions? As mere laymen, we are led to remark that such a conclusion savors quite as little of early Christian ethics as it does of any known code of professional ethics, however much it may be in accord with the commercialism of modern religious journalism

Would the Rev Mr Clarke wish his readers to believe that, if the Great Physician were to day walking the earth among men he would distribute advertising circulars and sample packages of Vitæ Ore, instead of loaves and fishes to the multitude that hung on his words, and thus "heal the body as well as minister to the soul?"

Can one imagine Paul of Tarsus, who fought with beasts at Ephesus and who died a martyr for his faith, or the beloved John on the Isle of Patmos, taking the position that it was "hardly his function to decide questions in accordance with any professional code of ethics?"

Would the advertising manager of the *Cumberland Presbyterian* have been willing to certify that Luke, the beloved physician, was "personally known to the publishers of this paper as a reliable and competent physician" unless he had entered the office of this religious journal with a fat advertising contract in his hand?

Can the whole filthy, disreputable nostrum business boast of a more disgraceful piece of literature than this blasphemous and sacrilegious attempt—shown in the *British Medical Journal*—to use the personality of Jesus Christ to boom the sales of a nostrum and to make advance agents out of weak minded Christian clergymen? And can any honest member—either lay or clerical—of the Cumberland Presbyterian church, or any other church, look without shame on an editor and a paper which, while claiming to advocate the purity of the church have no better defense to offer than that all advertising is lying anyhow, and that other papers do the same thing? Yet much time has been spent in discussing the reasons why the church of to day lacks the vigor and energy of apostolic times A glance into some of our religious journals will supply at least a partial solution of the problem

* THE JOURNAL, Feb 2 1907 p 436.

HISTORICAL

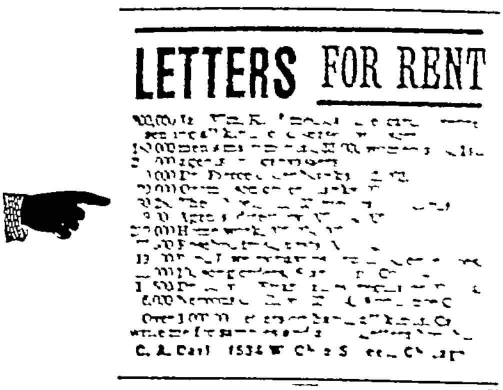
The interesting nostrum mentioned above has been exploited for the past fifteen years by its owner and "discoverer" (?) Theophilus Noel This gentleman was formerly engaged in the newspaper business and later in mining and is said to lay claims to special knowledge as a geologist and mineralogist We are informed that he came to Chicago in 1891 and engaged in the "patent medicine" business, advertising and selling Vitæ Ore, which he claimed to be a mineral which he had discovered somewhere in Florida or Mexico This preparation is sold in the form of a powder put up in envelopes which retail at $1 00 each It is supposed to be dissolved in water and drunk. The advertisements, which appear mainly in religious papers, state "It is a mineral remedy, a combination of substances from which many of the world's noted curative springs derive medicinal power and healing virtue These properties of the springs come from the natural deposits of mineral in the earth through which water forces its way, only a very small proportion of the medicinal substance being taken up by the liquid"

An analysis published in Bulletin No 69 of the North Dakota Agricultural College Experiment Station states that Vitæ Ore is simply ferric subsulphate (Monsel's salt), to which a little magnesium sulphate (Epsom salt) has been added Our readers can readily choose the more reliable of these two statements One can also readily understand how exceedingly beneficial Monsel's salts and Epsom salts would be in cases of rheumatism, diabetes, Bright's disease, gout, "stomach trouble," diphtheria and the other diseases for which Vitæ Ore is recommended

This nostrum is also interesting as showing the profits to be derived from such a business In 1891 Mr Noel is said to have been compelled to peddle his nostrum in person in order to obtain sufficient means to start his business In 1893, only fourteen years ago, he is reported to have had in his employ two girls and three men The extent of the establishment was three or four rooms and a basement The business now occupies a three story building covering three building lots The owner has a summer home in Michigan, a winter home in California, a permanent residence in Chicago and spends most of his time in travel It is alleged that one of his recent trips to Germany was for the purpose of being treated for chronic rheumatism, which evidently Vitæ Ore had failed to relieve It is claimed that the present assets of the company amount to over $200,000

As has been said, most of the advertising of this firm has been carried on in the religious papers Here we have further evidence that piety, properly exploited, is a valuable asset in the "patent medicine" business

However, the founder of this edifying mixture of faith and works is no longer the dominant factor in the business One is led to wonder whether rheumatism has had anything to do with his retirement Surely not, since the advertisement states that "Thousands of people testify to the efficacy of Vitæ Ore in relieving and curing rheumatism," and that "This medicine cures, whether the sufferer believes it or not." The principal factor in the business is now Dr Joseph R Noel, who was graduated in 1894 from Jefferson Medical College, practiced three years at Ogden and Harrison Streets, Chicago and taught therapeutics for a time at one of the night medical schools of Chicago Did he advise his students, we wonder, to prescribe Vitæ Ore for rheumatism? Did he learn his present therapy at Jefferson? He has recently opened a bank, possibly as an outlet for the money sent him by readers of religious papers It is possible that he foresees the coming end of the nostrum business, and wishes to "make to himself friends of the mammon of unrighteousness" We are informed that he is the J R Noel, M.D, alluded to in the extract from the *Lancet*



The above is reproduced from the [illegible]. Editors of religious papers will [illegible] Brother Noel, in selling the names of those sufferers who [illegible] him in hopes of obtaining relief, is [illegible] not to let his right hand know what [illegible]

Isn't this a delectable mixture [illegible] successful nostrum [illegible] has dabbled in many things [illegible] all, no money but unlimited nerve, a mixture of [illegible] a pinch of mystery, and a [illegible] Put on to boil in a religious weekly [illegible] display advertisement, [illegible] with piety and cant of the [illegible] and serve hot to an ignorant [illegible] a Sunday School lesson leaf

Correspondence

Preparations of Dios Chemical Company Not Approved

[illegible] 1907

To the Editor:—As secretary of the [illegible] Medical Society I am instructed to [illegible] made by the Dios Chemical Company [illegible] A very nice young physician [illegible] traveling for the house and, [illegible] stated to our physicians that [illegible] their preparations had been approved [illegible] on Pharmacy and Chemistry. As I [illegible] on the list furnished by [illegible] on the subject, as our [illegible] pharmaceuticals which have been [illegible]

[illegible]

[ANSWER.—None of the Dios Chemical Company's preparations has been approved [illegible] Pharmacy and Chemistry. About a year ago [illegible] circular to the effect that it [illegible] when its attention was called [illegible] circular. Evidently, however [illegible] a different way, the impression [illegible] approved by the Council on Pharmacy and Chemistry [illegible] are with us in this fight for [illegible] and who are willing to [illegible] prescribe anything that has not been [illegible] will find a list of the accepted [illegible] of the first issue of THE JOURNAL [illegible]

Superstition in [illegible]

[illegible] 29, 1907

To the Editor:—The article of [illegible] in THE JOURNAL, January [illegible] arguments and the authors [illegible] by every progressive physician. [illegible] with him, on the views expressed [illegible] subject of contiguity and continuity [illegible] although he seems to have overlooked [illegible] heredity, but I wish to relate [illegible] with this subject. A man [illegible] wife, with

a [illegible] pregnant [illegible] tion in [illegible] woman [illegible] gave birth [illegible] double [illegible] due to [illegible]

The [illegible]

[illegible]

the [illegible] giving the [illegible] causes of [illegible] to call attention [illegible] part [illegible] other cases I have [illegible] months and even years. [illegible] the cervix [illegible] causes [illegible] or even [illegible] foreign [illegible]

The [illegible]

[illegible]

and developing exact methods of eradicating it This prejudice, however, is not found in the younger men, many of whom have visited America P C CLEMENSEN, M.D

One Standard of Medical Licensure Asked in New York.

60 E 77th St, NEW YORK, FEB 8, 1907

To the Editor —Year after year the medical profession of New York has been called on to oppose the passage of laws creating state examining boards in osteopathy, dermapathy, optometry and so on Year after year we have succeeded in convincing the legislature that the passage of such laws would be unwise, but, in answer to the inquiries of senators and assemblymen, "What are you going to do with these people who besiege us each year?" we have answered, "Let them comply with the present law and then practice any method they choose" Then has come the second pertinent query, "The homeopaths have a separate board, why should not the osteopaths be granted the same privilege if they will comply with all the requirements excepting treatment?"

As the result of all this a bill has been drawn up which is endorsed by the State Department of Education and many leading members of the legislature, accurately defining the practice of medicine and providing for a single examining board, before which all who desire to practice the healing art must come and pass a common examination, eliminating the subject of practice, assuming that all who have the other necessary qualifications will be able to practice intelligently the method which seems to be indicated in the cases they meet

It is not expected that the enactment of this law is going to bring about an immediate leveling of all the barriers now existing between "allopathic" homeopathic and other "pathic" physicians although, doubtless, that will be the ultimate result Nor will it prevent the demands in the future of peculiar classes desiring separate recognition for commercial and other reasons It will, however, place the legislature in a position to say when future efforts to secure class legislation along medical lines are made, that the State of New York recognizes only the ordinary educated physician and the hod of practice is something the individual physician must termine for himself It will place medical practice on a igher plane than has heretofore been accorded it and will accomplish what our present law was designed for, and has failed to do, namely properly protect the people of the State of New York from incompetent physicians

Will you please request your New York readers to write their representatives in the legislature at once urging the defeat of osteopathy, optometry and all similar bills and the passage of the single board bill, which is Senate Bill No 154 Assembly Bill No 160, and to use these numbers when writing

FRANK VAN FLEET M D

Chairman, Committee on Legislation of the Medical Society of the County of New York.

A Protest Against Compulsory Publicity

ROCHESTER MINN Feb 10 1907

To the Editor —We have lately suffered an unwarranted intrusion into our private affairs, through the publication in certain newspapers of a sensational article furnished by a "Sunday Supplement' syndicate Up to the present we have succeeded in checking several such publications We are now taking legal steps to determine what redress if any may be had and to what extent not only ourselves but the medical profession as a whole can be protected against such outrages on common decency

W J and C H MAYO

Association News

Special Rates for the Atlantic City Session.

According to advices one first class fare plus $1 00 for the round trip, going and returning by the same routes, will prevail from points more than 100 miles from Atlantic City Tickets will be on sale June 1 to 4, inclusive, returning leaving Atlantic City June 4 to 10, inclusive A special validating agency is also promised so it is to be hoped that there will be little trouble in this regard

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address but the request of the writer not to publish name or address will be faithfully observed.

NEPHRITIS COMPLICATING EXOPHTHALMIC GOITER

NEW YORK, Jan 28 1907

To the Editor —Please inform me whether Bright's disease complicates exophthalmic goiter and what influence nephritis would have on this condition CHARLES F D'A FRANCIS

ANSWER —Nephritis is not recognized as a common complication of exophthalmic goiter, several authors do not even mention albuminuria as a symptom Others do so but no emphasis is placed on it Thus Tyson (Practice of Medicine, 3d edition, 1903, p 675) says "Intermittent albuminuria is frequent, as pointed out by Dr Begbie" Moebius, in Nothnagel's System refers to albuminuria as being occasionally present. Slight toxemic degeneration of the renal epithelium in long-continued or severe cases may explain such albuminuria. Of course, exophthalmic goiter may appear in one who has a genuine nephritis the association of the two conditions being purely accidental Such a case is reported by Elliot (THE JOURNAL June 17, 1905 p 1807), in which exophthalmic goiter was complicated both by glycosuria and by a true nephritic albuminuria with albuminuric retinitis In regard to the association of Bright's disease with exophthalmic goiter he says No direct association exists between exophthalmic goiter and nephritis, although transient albuminuria has been noted during the periods of acute disturbance Chronic Bright's disease is not numbered among the epiphenomena of exophthalmic goiter Lastly in exophthalmic goiter there may develop a period of cardiac incompetency from myocardial weakness. When this occurs dilatation of the heart with passive congestion of the liver and kidney edema of the lower extremities etc. may be present Such a renal congestion might be accompanied by a not inconsiderable trace of albumin in the urine, and even by a few casts

THE LENGTH OF HYPODERMIC NEEDLES

MAHANOY CITY PA. Jan 22, 1907

To the Editor —I would like to have your opinion why the present hypodermic needles are made an inch to an inch and a half long My idea is that a needle half an inch long has the advantage that it is not so likely to puncture a superficial vein and that it will be almost impossible to reach an artery or nerve The same physiologic action will result from either length

G W REESE, M D

ANSWER —While the average length of the needles generally sold with hypodermic syringes may be longer than is necessary, our correspondent is in error in assuming that they measure from an inch to an inch and a half in length The better class of manufacturers are sending out syringes equipped with needles from three-quarters to one inch in length These lengths have been adopted because of a general demand for these sizes Those who prefer needles of shorter length can obtain them by specifying the length they want Modern surgical instrument catalogues illustrate needles as short as one-quarter of an inch Our opinion is that needles of one-half to five-eighths of an inch in length are preferable to those of standard length

RULES FOR FIRST AID TO THE INJURED

WARRIOR ALA Jan 28 1907

To the Editor —Where can I obtain a formula of rules for the care of the injured around mines and brickyards—rules to be posted around the above-named places and used to instruct in first aid to the injured? J G VANCE, M D

THE RUSSO 'REACTION

DENVER Jan 31 1907

To the Editor —Will you tell me where I can get information regarding Russo's reaction of methylene blue in urine? I am desirous of learning something of its nature In the abstract in THE JOURNAL it states that the reaction occurs as an ordinary physical phenomenon in any urine.

ANSWER —The reaction referred to was proposed by Russo (*Riforma Medica* May 13 1905) and consists in adding to 4 or 5 c c. (one dram) of urine 4 drops of a solution of methylene blue In typhoid patients he found that the urine became a light green in the first stage an emerald green at the height of the disease and gradually assumed a bluish green to blue color during the stage of decline and convalescence. Russo believed that the color depended on toxins present in the urine and might be made of diagnostic value. It was possible by simple experiments for E Cousin and S Costa (*Presse Medicale* March 14 1906) and also Ch Gandy (*Presse Medicale* March 21 1906) to prove what might have been suspected beforehand that the green color was due to the mixture of the blue liquid with the yellow urine. Every

one is familiar with the fact that a mixture of pigment blue with yellow produces green The varying shades of color observed by Russo are due to the varying concentration of the urine at the different stages of the disease Cousin and Costa found that diluting the urine restored the blue color and that the green tint could be produced by placing a test tube containing the methylene blue solution in a beaker containing urine of a deep yellow color without mixing the liquids at all Gandy decolorized typhoid urine which gave the reaction and found that after the color was removed the urine gave a blue color instead of the green previously obtained The reaction is therefore, a mere physical phenomenon depending on the color of the urine and not on any chemical change and is devoid of any diagnostic value

BEST CLIMATES FOR HAY FEVER

CINCINNATI Feb 6 1907

To the Editor —Can you inform me whether there are any districts in the United States which are entirely free from hay fever? G A HINNEN

ANSWER —We published a reply to a question covering the same ground in THE JOURNAL, Aug 11 1906 page 457

LAXINE.

TOLEDO OHIO Feb 1 1907

To the Editor —The Columbus Pharmacal Company makes a product for sale to physicians which they call Laxine The label states that this is a synthetical laxative the chemical name of which is Di hydroxy benzo-methy-quino-lactone This sounds well but I can find no one in this city who can tell me what it means Will you please tell me what this chemical is in plain every-day English? A number of local physicians are interested and will be grateful for the information GEORGE H JONES

ANSWER.—This is probably phenolphthalein. For a discussion of this subject see THE JOURNAL, Jan. 5 1907 p 64 Method of Introducing New Preparations, and also p 70 As phenolphthalein is a comparatively new preparation it is being introduced under other names—purgen for example and it will not be surprising if it becomes the chief ingredient of some new proprietaries It can be bought of any wholesale chemist at from 35 to 50 cents an ounce.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers U S Army for the week ending Feb 9 1907

Vedder, Edward B asst surgeon relieved from duty in the Philippines Division, and will proceed to the United States and on arrival report by telegraph to the military secretary of the Army for further orders

Williams Allie W asst surgeon advanced to rank of captain from Feb 4 1907

Fife, James D., asst.-surgeon, ordered to proceed from Fort Slocum N Y to Jefferson Barracks Mo for temporary duty and on completion thereof will return to his proper station

Nelson, Kent, asst. surgeon, ordered to proceed from Fort McHenry, Md. to Fort Slocum, N Y. for temporary duty On the return of Asst.-Surgeon Fife U S Army to Fort Slocum Captain Nelson, asst. surgeon will rejoin his proper station

Stephenson William surgeon ordered to report to commanding officer Troop K, Fourteenth Cavalry Presidio of San Francisco to accompany said troop to Boise Barracks Idaho On completion of this duty to return to his station the Presidio of San Francisco

Bradley A. E surgeon, relieved from duty at Fort Sheridan, Ill and ordered to report in person to the military secretary of the Army in this city for instructions and will then proceed to Fort Slocum N Y., for purpose of investigating certain methods relating to the examination of recruits and thence to Jefferson Barracks Mo., for station and duty

Woodall William P asst. surgeon relieved from duty at Fort Clark Wash and ordered to Fort Logan Colo for duty

Lambert, Samuel E. asst surgeon relieved from duty at Fort Wright Wash., and ordered to Fort Logan Colo., for duty

Bell, Richard P., contract surgeon relieved from duty at Fort Monroe Va., and ordered to duty at Fort Wadsworth, N Y

Felts Ribert L. contract surgeon ordered to Savannah, Ga. for annulment of contract and granted leave of absence for twenty days.

Shellenberger James E contract surgeon died Feb 4th at Christ Hospital Cincinnati

Wolven F Homer dental surgeon left Fort Monroe Va., and arrived at Fort Hamilton N Y for duty

Slayter John T H contract surgeon returned to Fort William Henry Harrison Mont from temporary duty at Fort Lincoln N Dak.

Navy Changes

Changes in the Medical Corps U S. Navy for the week ending Feb 9 1907

Bacon Sankey acting asst surgeon, appointed acting asst.-surgeon from Feb 1 1907

Lumsden G P., medical inspector detached from Naval Rendezvous, Dallas Texas and ordered home to wait orders.

Stibbens F H asst. surgeon ordered to the Naval Training Station San Francisco.

Ruge O G., pharmacist, ordered to the Naval Medical School Washington D C.

Public Health and Marine-Hospital Service

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Jan 6 1907

Kerr J W, asst. surgeon general granted leave of absence for two days from Jan 31

Stoner G W surgeon directed to report in Washington D C for special temporary duty, on completion of which to rejoin station

Williams L L surgeon granted leave of absence for one day February 6 under Paragraph 189 of the Service Regulations

Stimpson W G surgeon granted three days leave of absence as requested.

Cofer L. E., P A. surgeon granted leave of absence for twenty two days from February 4

Clark Falinferro P A surgeon directed to report in Washington D C. for special temporary duty on completion of which to rejoin station

Heiser V G P A surgeon reassigned as chief quarantine officer Philippine Islands to take effect July 17 1906

Gwyn M K. P A surgeon two days leave of absence granted from January 17 revoked

Schereschewsky J W P A surgeon directed to report in Washington D C for special temporary duty on completion of which to rejoin station

Boggess J S P A. surgeon, temporarily relieved at Stapleton N Y and directed to proceed to Perth Amboy N J and assume temporary charge of the service.

de Valin Hugh, asst. surgeon granted leave of absence for two days from Jan 22 1907

Keatley H W acting asst.-surgeon granted leave of absence for four days from Jan. 26 1907 under Paragraph 210

Safford M V acting asst. surgeon directed to report in Washington D C. for special temporary duty, on completion of which to rejoin station

Stevenson J W acting asst.-surgeon granted leave of absence without pay for two months, or so much thereof as may be necessary beginning Feb 18 1907

Wilson R. acting asst. surgeon granted leave of absence for thirty days from February 14

Troxler R. F pharmacist, granted leave of absence for six days from February 4.

Morris G A pharmacist, granted leave of absence for fifteen days from February 6

Thomas A. M pharmacist, leave of absence for thirty days amended to be effective January 23, instead of January 20

BOARDS CONVENED

A board of officers was convened to meet at Portland Me on February 5 for the purpose of making a medical examination of an alien Detail for the board Surgeon P C Kalloch chairman Surgeon W P McIntosh Acting Asst. Surgeon M V Safford recorder

A board of officers was convened to meet at Port Townsend Wash., for the purpose of making a physical examination of Pharmacist G C Allen to determine his fitness to promotion to the grade of pharmacist of the first class Detail for the board Surgeon W G Stimpson chairman P A. Surgeon J H Oakley recorder

A board of officers was convened to meet at Stapleton N Y for the purpose of making a physical examination of Pharmacist Edward Rogers to determine his fitness for promotion to the grade of pharmacist of the first class Detail for the board Surgeon P H Bailhache chairman P A surgeon H W Wickes recorder

Health Reports.

The following cases of smallpox yellow fever cholera and plague have been reported to the Surgeon General Public Health and Marine-Hospital Service during the week ended February 8 1907

SMALLPOX—UNITED STATES

Georgia Augusta Jan 22 29 3 cases
Indiana Indianapolis Jan 20 27, 13 cases 2 deaths
Michigan Detroit Jan 26-Feb 2 6 cases
Mississippi Natchez Jan 19-26 3 cases
Missouri St. Joseph Jan 19 26 12 cases
Ohio Cincinnati Jan. 25-Feb 1 1 case
Washington Spokane, Jan 12 19 14 cases (Imported)

SMALLPOX—FOREIGN

Canada Cape Breton Sydney Jan 26 present Kent County present Nova Scotia Colchester County present Cumberland County present Pictou County epidemic.
Chile Antofagasta Jan. 6 4 cases 2 deaths Coquimbo 16 cases 1 death Iquique Jan 6 present
Cuba Habana, Jan 30 1 case.
Ecuador Guayaquil, Dec. 1 31 27 deaths
France Paris Jan 5-12 11 cases.
Gibraltar Jan. 13 20 1 case (Imported)
Great Britain Cardiff Jan. 12 19 3 cases Liverpool [illegible]
Malta Dec. 29-Jan 5 1 case
Mexico City of Mexico Dec. 9-15 12 deaths.
Netherlands Rotterdam Jan 12 19 8 cases 1 death
Peru Lima, Dec. 1-21 9 cases
Russia Moscow, Dec. 29-Jan 1 death Odessa Jan 1- 10 cases 1 death
Spain Barcelona Jan 16 20 7 deaths

YELLOW FEVER.

Ecuador Guayaquil Dec. 1 31 17 death

CHOLERA—INSULAR.

Philippine Islands Provinces Dec 8 15 29 cases 22 deaths

PLAGUE.

Chile Antofagasta, Jan. 6 3 cases 1 death
China Niuchwang Jan 28 present.
Peru Callao Dec. 31-Jan [illegible] cases 1 death Ca[illegible] Dec 1[illegible] 2 cases 2 deaths Chiclayo 1 case 1 Mol[illegible] ca[illegible] deaths Paita, city and vicinity Dec [illegible] San Pedro 11 cases 2 deaths Trujillo

Marriages

CHARLES E IDE, M D, to Miss Margaret Davis, both of Red lands, Cal, February 9

JAMES EDWIN BALL, M D, to Miss Edith Wall, both of Mill ville, Mo, January 30

EUGENE WAHL, M.D, to Miss Mae Bradley, both of Edwards ville, Ill, January 30

EDWARD T DILLON, M D, to Miss Laura Doran, both of Los Angeles, Cal, January 29

PAUL ESNARD BECHET, M.D, to Miss Lucile Ducournau, both of Natchitoches, La, January 9

BENJAMIN FOSSE, M.D, to Miss Ethel Winifred Bennett, both of Beloit, Wis, January 16

WILLIAM T NEWMAN, M D, to Miss Elve Dolhonde, both of Independence, La, January 16

THOMAS STEPHEN GREENE, M D, to Miss Georgia Xaviere Schultz, both of Chicago, February 6

CHARLES E SMOOT, M.D, to Miss Elsie Moore, both of Pem berton, Ohio, at Covington, Ky, recently

H. DENELL WILLIAMS, M D, to Miss Adeline Diana Cereg hino, both of San Francisco, January 23

EDMUND WORRELL CARTER, M.D, Prattsburg, Ga, to Miss Christine Kelly, Augusta, Ga, January 23

CHAUNCEY MAY POND, M.D, Groveland, Cal, to Miss Joseph ine Kebby, at Alameda, Cal, February 6

W W MCDONNELL, M.D, to Miss Vida Lester, both of Macon, Ga, at St Augustine, Fla, January 16

ROBERT ORMISTON BROCKWAY, M.D, Brooklyn, N Y, to Miss Florence Stiasny of New York City, January 30

Deaths

R. Harvey Reed, M D Department of Medicine of the Univer sity of Pennsylvania, Philadelphia, 1876, a member of the American Medical Association and the Association of Military Surgeons of the United States, formerly president of the Wy oming State Medical Society and of the Rocky Mountain Interstate Medical Association, surgeon general of Wyoming, professor emeritus of principles and practice of surgery and clinical surgery in Ohio Medical University, Columbus, for merly editor of the *Columbus Medical Journal*, division sur geon of the Union Pacific Railway, with headquarters at Rock Springs, Wyo, and surgeon of the Union Pacific Coal Com pany, who had suffered for a long while from the effects of septicemia and had gone to Southern California for his health, committed suicide at the Hotel Lankershim, Los Angeles, January 30 by gunshot wound of the head, aged 56 His body was cremated at Evergreen Cemetery

Claiborne J Walton, M D University of Louisville, Medical Department 1853, first representative to the Kentucky legis lature from Hart County in 1850, state senator in 1855 and 1859, resigning to enter the Federal Army, where he served throughout the Civil War as surgeon of the Twenty first Ken tucky Volunteer Infantry, after the war a member of the state senate in 1873, 1881 and 1895 and a member of the leg islature in 1899, in 1890 appointed United States pension agent at Louisville died at his home in Munfordville from cerebral hemorrhage, February 1, after an illness of six weeks aged 83

Francis L Stone, M D Bellevue Hospital Medical College, 1865, one of the oldest practitioners of Genesee County, N Y, and coroner of the county, at one time president of the county medical society for several years, and a member of the State Medical Association and of the New York State Association of Railway Surgeons and local surgeon for the Buffalo, Rochester & Pittsburg Railroad; town clerk of Stafford for several years died at his home in Leroy, January 22, from influenza after an illness of four weeks, aged 72

Johnson Van Dyke Middleton, M.D., who entered the medical department of the Army as lieutenant and assistant surgeon in 1861 was made captain in 1866 major in 1876 lieutenant colonel in 1893 and served as medical supply officer at San Fran cisco during the Spanish American War, was retired in 1898 and attained the rank of colonel retired in 1904, who was brevetted captain and major for services during the Civil War, died at his home in Washington D C., January 30 aged 72

William Denny, M.D Miami Medical College, Cincinnati 1879, a member of the American Medical Association, one of the founders of the Washington (Pa) Hospital, a member of the board of managers of the State Reform School, Morganza, treasurer of the Washington school board and Washington County jail physician, died at his home in Washington, Febru ary 1, from cerebral hemorrhage, after an illness of five days, aged 52

James Alexander Finley, M.D Department of Medicine of the University of Pennsylvania, Philadelphia, 1872, who en tered the United States Army as lieutenant and assistant sur geon in 1874, promoted to captain and assistant surgeon in 1879, and was retired in 1893, and afterward lived in Haver ford, Pa, died at Bryn Mawr (Pa) Hospital, after an opera tion for aneurism, January 23, aged 57

William Wesley Davis, M.D College of Physicians and Sur geons, Keokuk, Iowa, 1871, one of the oldest physicians of Davis County, Iowa, a member of the Des Moines Valley Med ical Society and Davis County Medical Society, while despond ent on account of ill health, took carbolic acid and died a few minutes later, at his home in Floris, Iowa, January 25, aged 72.

Henry William Haslit, M.D Illinois State Board of Health 1879, Missouri Medical College, St Louis, 1888, of Grandview, Ill, a member of the state and county medical societies and the Æsculapian Medical Society of the Wabash Valley, died at the Union Hospital, Terre Haute, Ind, January 22, from injuries received in a railway accident 56 hours before, aged 58

William F Ard, M.D University of Maryland School of Medicine, Baltimore, 1891, formerly house surgeon at the Woman's Hospital in the State of New York, and later at tending physician at the City Hospital, Binghamton, N Y, a practitioner of Westchester, N Y, died in New York City, January 24, after an illness of more than two years, aged 40

Ludwig Hubert Junghanns, M.D University of Freiburg, Ger many, 1856, staff surgeon to General Fremont during the Civil War, from 1870 to 1880 in the service of the Japanese gov ernment as medical officer, and thereafter a resident of Pough keepsie, N Y, died at Vassar Hospital in that city, January 26, from cancer of the stomach, aged 72

Augustus L Justice, M.D Northwestern University Medical School, Chicago, 1875, a member of the American Medical Association, surgeon in the Confederate army during the Civil War, until two years ago state quarantine officer at El Paso, Tex, died at his home in El Paso, January 30, from nephritis after a short illness, aged 66

William Drechsler, M.D Washington University, Medical De partment, St Louis, 1853, surgeon of the Fifth Missouri Vol unteer Infantry during the Civil War, for two terms a mem ber of the St Louis Board of Education, died at his home in St. Louis, February 1, from cerebral hemorrhage, after an illness of 16 days, aged 77

Abram J Williams, M D University of Maryland School of Medicine, Baltimore, 1872 a member of the house of delegates from Calvert County Md, in 1898, afterward county health officer and more recently vaccine physician for the second dis trict, died at his home in Barstow, near Prince Frederick town January 24, aged 58

George Wentworth Newton, M.D University of Pennsylva nia, Department of Medicine Philadelphia, 1884, for several years a director and treasurer of the Chicago West Side Hospi tal, and associate professor of gynecology in the College of Physicians and Surgeons, died at his home, February 9 from pneumonia, aged 46

George H Thoma M D Albany (N Y) Medical College, 1864, a member of the American Medical Association, and one of the leading physicians of Nevada a veteran of the Civil War, died at his home in Reno January 31 from meningitis following a light attack of influenza after a short illness aged 54

Edwin Theodore Parker M.D Tulane University of Louisi ana, Medical Department New Orleans 1891, a member of the American Medical Association and one of the best known phy sicians of southern Alabama died at his home in Brewton from heart disease, January 22 after an illness of two weeks aged 41

Edwin R. Lewis, M.D Harvard University Medical School Boston 1867, a veteran of the Civil War, for many years a practitioner of Indianapolis and thereafter an examiner in the United States pension bureau Washington D C, died in Madi son Ind after an illness of six months, January 31, aged 67

Richard P Comfort, M.D Columbus (Ohio) Medical College 1882 a member of the Michigan State Medical Society and

for 30 years a practitioner of that state, died at his home in Nashville, January 27, from septicemia, due to an operation wound, after an illness of several months, aged 58

William H. H. Miller, M.D. Pennsylvania Medical College, Philadelphia, 1849, for many years a prominent member of the Lycoming County (Pa.) Medical Society, and for nearly half a century a practitioner of Williamsport, died in that city, February 1, from nephritis, aged 81

Theodore Van Lear Davis, M.D. Jefferson Medical College, Philadelphia, 1856, for seven years assistant physician at the Western State Hospital for the Insane, Staunton, Va., died at his home in Greenville, Va., Nov. 9, 1906, from senile debility, after an illness of three years, aged 77

Levi S. Campbell, M.D. University of Louisville, Medical Department, 1855, formerly a practitioner of Indianapolis, but for the last five years a resident of Los Angeles, Cal., died at the home of his son in that city, January 31, from influenza, after an illness of six weeks, aged 84.

David A. Collins, M.D. Medical School of Harvard University, Boston, 1886, assistant surgeon of the Ninth Regiment, M. V. M., for several years, and physician for the Eliot school district for three years, died at his home in Roxbury, Boston, February 5, after a lingering illness, aged 44

Benjamin Frantz, M.D. Jefferson Medical College, Philadelphia, 1846, dean of the medical profession of Franklin County, Pa., where he had practiced for more than 60 years, died at his home in Waynesboro, February 1, from angina pectoris, after a short illness, aged 82

Christian Rohr Johns, M.D. Jefferson Medical College, Philadelphia, 1890, for several years general secretary and physical director of the Hazleton (Pa.) Y. M. C. A., died at his home in Hazleton, January 30, from hypertrophy of the liver, after a long illness, aged 43

E. Scott Pigford, M.D. Hahnemann Medical College and Hospital, Chicago, 1880, for 20 years a practitioner of Wilmington, N. C., died at the James Walker Memorial Hospital in that city, January 23, from cerebral hemorrhage, after a short illness, aged 63

Augustus A. Moloney, M.D. College of Physicians and Surgeons in the City of New York, 1869, a member of the state and county medical societies, died suddenly at his home in New York City, from heart disease, January 31, after a short illness, aged 59

Edmund C. Rickerts, M.D. College of Physicians and Surgeons in the City of New York, 1885, superintendent of the Tweedie Trading Company, died at his home in Brooklyn, January 9, from pneumonia, after an illness of eight days, aged 55

Augustus Frank Bauer, M.D. Miami Medical College, Cincinnati, 1891, died at his home in Chicago, February 3, from pneumonia, said to have been due to exposure and overwork in connection with the present epidemic of contagious diseases, aged 39

Thomas J. Gray, M.D. Hering Medical College, Chicago, 1893, of Berkeley, Cal., formerly president of the St. Cloud (Minn.) Normal School and Greeley (Colo.) Normal School, died at Tonopah, Nev., January 20, from typhoid fever after a short illness

Herman J. Abel, M.D. University of Buffalo, Medical Department, 1895, a member of the Medical Society of the State of New York, died at his home in Honeoye, N. Y., January 30, from tuberculosis, after an illness of seven months, aged 36

Robert W. Hansen, M.D. Columbus (Ohio) Medical College, 1886, of Haigler, Neb., died on a train en route to Denver, where he was being taken to have an operation performed for skull fracture, due to an unexplained accident, January 29

George W. Clower, M.D. Southern Medical College, Atlanta, Ga., 1882, for two years representative in the legislature from Coweta County, Georgia, died at his home in Grantville, January 26, from cerebral hemorrhage, after a short illness

Hugh Douglas McLean, M.D. Jefferson Medical College, Philadelphia, 1854, surgeon of the One Hundred and Sixth Pennsylvania Volunteer Infantry throughout the Civil War, died at his home in Philadelphia, February 3, aged 77

W. A. Jemison, M.D. University of Louisville, Medical Department, 1876, of Carrollton, Ky., a veteran of the Civil War, died at the home of his son-in-law in that city, February 2, from pneumonia, after a short illness, aged 65

John W. Mason, M.D. Missouri Medical College, St. Louis, 1899, of Brookfield, Mo., and formerly coroner of Linn County, died at the home of a patient, from the effects of a self-inflicted gunshot wound, February 1, aged 40

John C. Beck, M.D. Rush Medical College, Chicago, 1900, assistant in surgery at the Chicago Policlinic, died at his home in Chicago, February 7, from tuberculosis of the throat, after an illness of three months, aged 38

Alexander G. Barnhill, M.D. St. Louis College of Physicians and Surgeons, 1893, surgeon for the Minera (Texas) Coal Company, died at Minera from the effects of an accidental gun shot wound, January 26, aged 39

Elsner Christian Gunther, M.D. Harvard University Medical School, Boston, 1892, of New York City, died at the hospital of Dr. William T. Bull, New York City, January 31, after an illness of several months, aged 42

Oliver M. Sheridan, M.D. New York University Medical College, 1886, a practitioner of Roxbury, Boston, for more than 15 years, a member of the Massachusetts Medical Society, died at his home, January 29, aged 43

S. H. Smith, M.D. Philadelphia College of Medicine and Surgery, 1841, for more than 40 years a resident of Nichols, Iowa, died at his home January 28 from cerebral hemorrhage, after an illness of a few hours, aged 87

Amecy Beason Seward, M.D. Cincinnati, a pioneer physician of Tipton County, Ind., died at the home of his daughter in Laurel, Ind., Dec. 26, 1906, from cancer of the stomach, after an illness of one year, aged 73

Marvin W. Thatcher, M.D. Long Island College Hospital, Brooklyn, N. Y., 1865, for many years a practitioner of Branch County, Mich., died at his home in Coldwater, January 31, after a short illness, aged 74

Theodore Herman Seyfert, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1867, died at his home in Philadelphia, January 27, from nervous disease, after a long illness

Frederick Weller Jones, M.D. Rush Medical College, Chicago, 1886, of Appleton, Wis., died at St. Elizabeth's Hospital in that city, January 29, from pneumonia, after an illness of ten days, aged 45

Everett H. Merwin, M.D. Chicago Homeopathic Medical College, 1893, treasurer of the Kansas City Homeopathic Medical College, was shot and killed in his office in Kansas City, January 9, aged 39

Alfred S. Alford, M.D. Memphis Hospital Medical College, Memphis, Tenn., 1882, a retired practitioner of Leander, Tex., and a Confederate veteran, died suddenly at his home, January 21, aged 65

Horace F. Trueman, M.D. Miami Medical College, Cincinnati, 1882, a well known physician of Toledo, died at his home in that city, January 31, from heart disease, after an illness of three days

Josiah P. Sugg, M.D. College of Physicians and Surgeons in the City of New York, 1867, of Kittrell, N. C., a Confederate veteran, died in Pittman Hospital, Tarboro, N. C., January 25, aged 65

Jefferson G. Martin, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1873, died at his home in Kahoka, Mo., January 31, from tuberculosis, after a lingering illness, aged 60

James H. Miles, M.D. University of Maryland School of Medicine, Baltimore, 1845, a school commissioner of St. Mary's County, Md., died at his home in St. Inigoes, January 28, aged 84

William N. Sullivan, M.D. Cooper Medical College, San Francisco, 1892, for several years a surgeon in the United States Navy, died at his home in San Francisco, January 31, aged 34

Edward M. P. Ludlam, M.D. Hahnemann Medical College and Hospital, Chicago, 1861, died at his home in Chicago, from erysipelas, after an illness of one week, February 9, aged 67

Thomas Osborne Butler, M.D. Chicago Homeopathic Medical College, 1881, died at his home in Chicago, January 26, from nephritis, after an illness of three months, aged 50

Darwin Cyrus Doolittle (Years of Practice, Illinois) 1877, died at his home in Woodstock, Ill., from cerebral hemorrhage, January 29, after an illness of two days, aged 82

Robert T. Wood, M.D. Medical College of Ohio, Cincinnati, 1878, a member of the state and county medical societies, died suddenly at his home in Paris, Ky., January 26

William B. Vick, M.D. Indiana Medical College, Indianapolis, 1881, died at his home [illegible], January 31, aged 78, after an illness of

L. C. Bell, M.D. Eclectic Medical Institute, Cincinnati, 1888, died at his home in Hamilton, Ohio, January 30, from nephritis, after an illness of several weeks, aged 43.

John Stout, M.D. Chicago Medical College, 1879, formerly physician of Peoria County, Ill., died at his home in Omaha, January 29, from heart disease, aged 54.

William M. Quarles, M.D. St. Louis Medical College, 1860, a Confederate veteran and a prominent citizen of Richmond, Mo., died suddenly at his home, February 2.

Joseph M. Abbott, M.D. New York Medical College, New York City, 1863, a Confederate veteran, died at his home in Trilby, Fla., January 4, aged 62.

James E. Shellenberger, M.D., contract surgeon United States Army, stationed at Fort Sam Houston, Tex., died at Christ Hospital, Cincinnati, February 4.

Deaths Abroad

L. Willems, M.D., former president of the Belgian Academy of Medicine and inventor of the vaccine for protection of cattle against pleuro pneumonia, died recently at Hasselt, Belgium.

A. P. Fokker, M.D., professor of hygiene at Groningen, Holland, died recently as the result of overexertion during the fire that destroyed the university buildings. He used to protest against the exclusive predominance given to bacteriology, and was inclined to believe that the so-called pathogenic microorganisms were products of the cells of the diseased organism, a form of "heterogenesis."

P. Budin, M.D., the well known professor of clinical obstetrics at Paris, Tarnier's successor, died at Marseilles January 23, aged 60. There is scarcely a branch of obstetrics on which he has not published some work, and he founded the *Obstétrique* in 1895. From simple beginnings, asking the women delivered at the maternity to bring their babies back every week for advice and encouragement, these "infant consultations" have become an established institution in France and are being copied in other lands. Their working has been described in THE JOURNAL. Budin strove indefatigably to have similar "consultations" established at other points, and his trip to Marseilles was for the purpose of delivering an address on the subject, when he succumbed to grippal pneumonia. With Roussel and Strauss he founded in 1902 the "League against Infantile Mortality," and has always been one of the pioneers in the line of the protection of infant life.

Sir Michael Foster, the eminent physiologist, died suddenly, January 29, in London, at the age of 70. He was educated at University College and graduated M.B. at London in 1859. He practiced for a few years as a doctor in his native town of Huntingdon and, taking a great interest in physiology, he devoted all his spare time to research. He was enabled to gratify his taste when he was appointed teacher in physiology in 1867 at University College and subsequently professor. In 1869 he was appointed to the Fullerian professorship of physiology at the Royal Institution, succeeding Huxley. In 1870 he went to Cambridge to teach physiology and was appointed prælector of physiology. In 1883 a chair in physiology was created for him by the university. He took a great share in the development of the Cambridge Biological School and his influence was not confined to the department of physiology, but extended also to the studies of vegetable physiology and morphology. In 1872 he was elected to the Royal Society, and in 1881 he succeeded Huxley, who became president, as one of its secretaries. He held this post until 1905, taking an active part in the multifarious work of the society. In 1900 he was elected member of parliament by the London University. His greatest work was his "Text Book of Physiology." The beauty of his English was also well displayed in his "Lectures on the History of Physiology" delivered at Cooper Medical College, San Francisco, in 1900. He also wrote "A Life of Claude Bernard," "Elements of Physiology" in conjunction with Dr. J. N. Langley, and "Elements of Embryology" with F. M. Balfour. He edited, with Dr. Ray Lankaster, the "Scientific Memoirs" of Huxley. He founded and edited the *Journal of Physiology*. The deceased was perhaps the greatest British physiologist of his generation. He was an admirable teacher both in the lecture room and in the laboratory, and he had the invaluable faculty of arousing the enthusiasm of his pupils. He found Cambridge with a meager equipment for scientific work and raised that university to the high position it holds to-day among schools of scientific research. Like many scientific men Sir Michael was in private life modest and unassuming. He was never so happy as when at his home near Cambridge with its broad lawns and spacious gardens. His hobby was horticulture and he was an enthusiastic gardener.

Society Proceedings

COMING MEETINGS

Assn. of American Med. Colleges, Richmond, Va., March 18, 1907.
Medical Society of Missouri Valley, Omaha, Neb., March 21, 22, 1907.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

One Hundred and First Annual Meeting, held in Albany, Jan. 28, 30, 1907.

(*Continued from page 536.*)

Diagnosis and Symptoms of Rheumatoid Diseases.

DR. R. R. FITCH, Rochester, divided these diseases into three classes: 1. Atrophic arthritis, usually known as arthritis. 2. Hypertrophic arthritis, formerly called osteoarthritis. 3. Chronic villous arthritis. In atrophic arthritis the glands are not enlarged and the blood is normal. Roentgen ray negatives are valuable in differentiating this condition from infectious arthritis. Hypertrophic arthritis, like atrophic arthritis, is a slowly progressive disease, but commonly occurs later in life. It first appears in the terminal phalangeal joints, while the atrophic form first involves the proximal row. The enlargement of the joints has not the spindle character of the atrophic form, but is localized definitely near the joint line. Hypertrophic arthritis may occur in any joint in the body, and produces its most disabling results in the hip joint. Hypertrophic arthritis of the spine is not infrequently diagnosed as intercostal neuralgia, renal or hepatic colic. The two conditions most likely to be confused with hypertrophic arthritis of the spine are infectious arthritis and mechanical lesions of the sacro-iliac joints. Chronic villous arthritis is usually a result of previous disease or injury. The increased amount of fluid in a distended joint stretches the membrane, causing it to thicken and take on a villous formation. These villi may go on to fatty or calcareous degeneration. The knee is the commonest location for this form of joint disease. There are no general symptoms, simply a mechanical condition producing swelling with crepitus and varying degrees of pain on motion.

Mechanical Treatment.

DR. H. L. TAYLOR, New York, thought that the medical profession does not fully appreciate the value of mechanic treatment in non-tuberculous affections of the joint because this method of treatment, as ordinarily practiced, is often ineffective. There need be no fear of atrophy and ankylosis. During the active stages of infection pressure and motion may both be injurious. These may be controlled by splints and apparatus with or without crutches, or recumbency, according to indications. Properly applied and timely mechanic control relieve pain, allay irritation, prevent deformity and favor recovery, except in those cases where there is active suppuration and where the original focus of general infection is of primary importance. Vibration, massage, and active, passive or forced movements may be required after irritation has subsided. If deformity remains, it can be remedied by mechanical or surgical means. In infectious arthritis suitable mechanic treatment is the main reliance, and when properly applied it gives perfectly satisfactory results.

Operative Treatment of Acute Suppurative Joints.

DR. WALTER WOOD, Brooklyn, dwelt on the danger of delay in acute suppurative joint infections. The operations indicated fall into two classes, incisions or incisions with removal of bone. In exceptional cases only aspiration with irrigation may be necessary. In reference to the ankle joint, in addition to the two incisions in front on either side, as usually advised, he has removed the astragalus on both sides and has been surprised at the good results obtained. In the knee joint it is not sufficient in the average case to make incisions in the classical way if one hopes to produce a movable joint. Continuous irrigation and additional drainage by a posterior tube through the popliteal space, or long incisions the whole length of the joint just above the lateral ligaments, have yielded some successes. He thought draining through the

condylar pouches better than through the popliteal space. For more advanced cases, where resection would formerly have been resorted to, he approves of making a transverse incision entirely across the joint above the patella, well into the lateral ligaments, thus opening the entire joint when the limb is strongly flexed In three cases where the elbow had become infected through a compound fracture of the olecranon process he removed the process down to its base, carefully preserving the lateral fascia of the triceps and treating the arm in the acute flexed position In all cases the sepsis promptly ceased, and the ultimate motion and strength of the arm nearly approached the normal This method probably gives a more useful arm than resection of the humerus where the septic process is far advanced

President's Address.

DR JOSEPH D BRYANT, in the annual president's address after briefly recounting the facts that led him to accept the presidency a second time and mentioning some of the numerous obstacles he had encountered in his endeavor to perform the responsible duties laid on him, said

"I will now bespeak your undivided attention, while briefly considering the character and the importance of the chief possessions of the State Medical Society, and of the great consequence of their development and care For the purposes of orderly thought in this consideration, these possessions will be grouped under two distinct headings

"1 Those already acquired and of established material worth

"2 Those of professional character, the prospective products of present opportunity and of devoted personal effort

THE JOURNAL

"The important factors of the first class are the *New York State Journal of Medicine* the Medical Directory of New York New Jersey and Connecticut, and the belongings relating thereto a library of considerable dimensions, a fruit of consolidation with the New York State Medical Association and finally, the privilege of legal and moral support of the society in malpractice defense

"The *Medical Journal* which, since its inception until a short time ago, has been to a greater or less degree a financial burden, is now reported to be no longer a source of expense And you will be told by those who should know whereof they speak, that with active promotion, proper support and prudent vigilance, the journal will soon become a continual source of healthful influence and of substantial revenue I am however, clearly of the opinion that the net earnings of the journal should be utilized for its betterment, and for the purpose of extending, when feasible, publication courtesies to such of those as contribute to its pages important and original articles It should not be the policy of this society, in my judgment to accumulate worldly belongings, but instead to increase the wealth of good fellowship and professional advance, by a wise adjustment relating thereto, of its business management

"In this relation it is well that you should realize at the outset, that our journal is having a circulation such as few medical journals possess, and with a prospect of a large increase in the near future affords opportunity fertile with responsive possibilities for those who thrive by the proper exploitation of legitimate business aims The policy of announcement of business matters in the journal is advised and supervised by the versatile chairman of the committee of publication Dr F Eliot Harris, who has given much time and thought to the differential consideration of patent, proprietary and allied kinds of medical agents The recent report of the committee relating thereto is both instructive and interesting, especially in these particular respects

"It should be plainly understood at this time, that the policy of the control of affairs by the *ad interim* house of delegates has been to conduct matters relating to the society so as not to constitute a pledge of real or implied nature which might be binding on the organized body, at least for a longer time than should be required by it to secure a satisfactory adjustment of its own matters of state

"Therefore any objectionable items of business announcement that are the products of previous contracts or of later conceptions of propriety which now find places in the publications of this society are either of brief permissible tenure therein, or of limited obligatory continuance, and in all respects subject to the selective verdict of the house of delegates and council of the present organized body I hope you will pardon a seeming presumption on my part if I urge in this connection that in the making of future contracts of these business announcements, the basis of such action should comprehend demands for pure drugs, whose names and virtues are in all respects definitely and ethically stated, and which are the products of honest pharmacists A different course than this would be a faithless one and, therefore, destructive of professional claims of honesty and of truth on our part since in the conduct of our publications the business and the editorial *departments, especially of the journal,* are under like control Whether or not the medical journals which for covetous business reasons, exploit remedial agents in a manner calculated to deceive the unwary, the unsophisticated and the indolent, are to receive professional support, will, as it seems to me, be determined more by the outcome of patiently developed and higher comprehensive professional sense, than by other inhibiting influences In the blazing of the way in these matters relating to honest ethical action, one can gain much indeed, in fitting knowledge and abiding support, through the force of the example which is now being established by the parent organization The scientific reports of this medical body regarding the character of exploited remedies submitted by its wisely formed and impartial 'Council on Pharmacy and Chemistry' and published from time to time in THE JOURNAL of the American Medical Association along with the action taken in noteworthy cases, are deserving of thoughtful study and of prudent emulation And concerning this matter I advise that the reports of this council and of the action taken relating thereto, be consulted by those who are hereafter placed in charge of these very important questions

"The scientific part of the *New York State Journal of Medicine* affords ample opportunity to the members of the organization to consult with each other in matters of professional interest, by the means of published opinions, and, thereby correspondingly, to profit mutually in many substantial ways The fact that each member of the organized body has rights in the *publication equal to those of another would seem to inspire* sentiments of mutual interest and fidelity, resulting in a more extended and higher standard of professional fellowship, than sometimes appears to exist. And, too, the united voice of the profession can be heard through the agency of the journal with a clear and unhindered emphasis on all matters relating to common professional and common public betterment And it is not impossible that some members of the profession whose isolation or experience has begotten in them exaggerated notions of self reliance or personal attainment might at a trivial outlay gain in wisdom and correspondingly in skill through the instrumentality of printed communion with their fellow laborers in the field of medical endeavor Also the *State Medical Journal* affords the best opportunity and at the least outlay of keeping in touch with the attainments of others and of placing those of your own before the profession that can be devised"

The speaker then stated that the editorial policy of a journal like theirs should be guided by the consensus of opinion of a committee rather than by the editor himself

THE DIRECTORY

In speaking of the medical directory of New York New Jersey, and Connecticut issued by the society Dr Bryant said that he believed it to be the best book of the kind ever issued The 1906 edition had been exhausted which spoke highly for the interest taken by the profession in the work and the president was disposed to attach great importance to the directory as a valuable asset of the organization It is he thought, "a prolific source of information in many matters of pressing interest of a professional nature settling many questions of professional status to the satisfaction or the discomfort of honest inquiry or deceptive intent respectively' and it enables one 'especially at a distance to come promptly in practical contact with another thus providing a co operative touch in business and professional matters of common interest"

MALPRACTICE DEFENSE

In speaking of The Privilege of Legal and Moral Support of the Medical Society in Malpractice Defense" Dr Bryant called attention to the well known fact that by far the greater number of malpractice suits are but unwarranted legal per cen tions In the majority of cases suits brought against physi cians work deep and lasting harm even though orable ac quittal is rendered for "he in a ra tice can rarely overtake picturesque It se m each member of the societ plea an organization which rea

those unjustly attacked in the faithful pursuit of their calling No one "engaged in the practice of medicine is immune to the subtleties of malignant mischief, or to the embarrassments of defensible error"

MEDICAL ORGANIZATION

On the matter of medical organization the president said

"Strange as it may appear to be, not half of the members of our profession in this populous state are constituent parts of representative medical organization Many of these members plod their weary way in comparative professional seclusion, unconscious or uncaring of the higher, more attractive and ennobling state, as begotten by sympathetic and mutually profitable intercourse with the profession at large.

"This condition is not what it should be, since the non members and the members of organized medical men alike, are losers thereby, the former, because of the loss of contact with those general professional activities which hasten understand ing, and correspondingly enhance confidence and self respect, the latter, because hidden away in the experience of the former class of practitioners there is much indeed, relating to the healing art of great significance to the entire medical profes sion If it be true that medical men or populous environ ment, possess comparatively more medical knowledge than do those of meager surroundings, it is equally true that the difference is largely the outcome of the special advantages arising from the benefits of a broader personal contact, for, at the beginning of their respective careers no special dissimilarity can be noted. It follows, therefore, that medical society mem bership affords a remedy of great importance in this respect, hence, the membership should be increased and extended, and professional intercourse developed, in order that to each medical man may be given the opportunity of contributing his special attainments toward advancing the common good of the whole profession

"At the present time, the membership of this society is about sixty five hundred, of which over 90 per cent have already qualified for continued membership, and are to day receiving the benefits relating thereto Each of these members should bring into the medical fold one of those who is not a participant with him in the special advantages of general pro fessional relationship The proper fraternal spirit in this society should purpose that every practitioner in medicine divorced from special dogma, and in good standing as a physi cian and a citizen should be entitled to membership

"The organization of the medical profession here, and everywhere throughout the country, contemplates the realization of more than the scientific advantages arising from personal contact and local co-operative thought It should be regarded as an earnest that the medical profession intends to take an active and controlling part, if possible, in those affairs of civil life which relate to the physical welfare of the body politic There should be no question regarding the status of the medical profession in all matters relating to the securing of pure food, pure drugs and wise public sanitation Properly fathered measures, directed to attaining these ends in the promptest and completest possible way, should receive the earnest, honest support of united medical effort It goes without saying, therefore, that your committee on legislation should be both vigilant and active in the discharge of its duties, vigilant in the detection and defeat of bad legislative efforts, and active in devising and promoting those which, in all respects, are good And in supporting the efforts of your committee on legislation each member of the medical body should make his influence felt in no uncertain manner, in the guiding legislative sense, so as to insure wise and beneficent law making

"It should come to your knowledge at this time that this state is entitled to be represented on the Committee of Medical Legislation of the American Medical Association. The pur poses of this committee, under the able leadership of Dr Charles A L. Reed, of Cincinnati, relate to the molding of national legislation of general interest to the medical profes sion and of coincident importance to the people of the country The functions of the Bureau of Medical Legislation as set forth by Dr Reed are as follows

To formulate lists of correspondents to revise and keep active the organization of the National and Auxiliary Councils to issue all referenda both special and general and to conduct all routine cor respondence relative to the legislative work of the American Medical Association

"The National Legislative Council generally convenes in Washington during the first month of each session of Congress The appointment of a representative by the state on this com mittee is of great importance, and, therefore, I earnestly com mend such action to your attention"

LEGISLATION AND INSURANCE EXAMINATION

President Bryant then spoke briefly of the bill recently intro duced in the New York legislature providing for a single headed board of examiners This board is to be appointed by the Board of Regents and independently of all medical society recommendations Dr Bryant deprecated the contest that had recently arisen between the insurance companies of the state and their medical examiners He was disappointed and grieved to know that many companies were recipients of medical services at a rate which could not call for the thoughtful con sideration such work demands He suggested that a committee be appointed to whom shall be referred all matters relating to medical insurance examinations that may come to hand during the current year In closing his address Dr Bryant spoke in terms of admiration of Dr Warbasse, the editor, and also of the secretary, Dr Ursner R Townsend and attorney Lewis He paid a gentle tribute to the memory of the late George Ryerson Fowler, who had been a student under President Bryant, as well as a close personal friend

(To be continued)

BOSTON MEDICAL LIBRARY MEETING

Regular Meeting, held Jan 16, 1907

DR GEORGE B SHATTUCK in the Chair

Treatment of Chronic Heart Disease

PROF THEODORE SCHOTT, Bad Nauheim, Germany, said that prior to 25 years ago rest and digitalis were the only thera peutic measures used in heart disease About 25 years ago three methods of treatment appeared simultaneously and quite independent of each other They are known to day as (1) Swedish treatment by massage, (2) Oertel's method, moun tain climbing, and (3) the balneologic method of the Schott brothers, combined with gymnastics During recent years the number of remedial agents has largely increased, but Profes sor Schott found that digitalis with and without digitoxin is a mainstay, but some times the accumulative effect calls for other means, especially tincture of strophanthus, or strychnin when the heart muscle is weak and relaxed. Its use is desir able to produce stronger contractions of the wall of the heart, but unless carefully watched it some times sets up a condition of abnormal irritability occasionally followed by weakening of the cardiac muscle

The nitrites especially nitroglycerin, in 1 per cent solution, are used in conditions where increased tension exists in the arteries The action of this is sometimes highly effective in case of pain in angina pectoris The salts of iodin sometimes produce a good effect like that of the nitrites

Salts of mercury, and especially calomel, are not remedies for the heart in the strict sense, but combined with digitalis they are used for their depleting effect The slowing of the pulse caused by morphin is the result of the vagi (?) action through the nervous mechanism, thus it fails to tone up the heart muscle, though this remedy is not to be disregarded in cases of pain It should not be used too frequently nor for too long a time

Oertel's Method—Twenty five years ago the treatment of heart disease by mountain climbing was advocated by Oertel with restriction of quantity of liquids ingested Oertel had three objects in view, first, to force the circulation by reduc ing the amount of liquid in the blood, second, to strengthen the heart by mountain climbing, and third to remove the superfluous fat by diet The mechanical part of Oertel's treatment consists in walking and climbing, in which different degrees of climbing were prescribed, in which he hoped to obtain development of the heart by increased action of the muscle He now combines that with the application of dry heat, electricity and massage His original treatment was de vised for fatty heart Oertel's treatment can only be adopted in a limited number of cases

Swedish Method—This method was started on a large scale in Sweden Having no scientific basis and not being improved on, the Swedish method never went beyond Sweden until

Zander took it in hand Opinions are divided as to its applicability The difficulty to properly regulate the resistance in the apparatus and the expense are the chief objections

Schott Method—In 1872 Stokes of Dublin showed that patients subject to rheumatic fever could successfully use mineral baths when rheumatism was combined with cardiac complaints The Schott brothers found that carefully regulated balneologic treatment combined with gymnastics, mountain climbing and well regulated hygienic conditions frequently produced an improvement and even an absolute cure They showed that the same principles underlie their treatment as underlie the treatment by digitalis and rest, namely, toning up a weak heart.

In the majority of cases there exists a comparative inadequacy of the heart muscle to propel the necessary amount of blood Not every dilatation leads to lack of compensation We must differentiate between dilatation due to congestion and dilatation following valve lesions The action of the heart muscle must be improved so that the heart may rid itself of the greater amount of blood The heart goes through many insufficient contractions, and after each systole a certain amount of blood remains in the heart cavities The congestion can not be relieved by the heart itself By balneologic and gymnastic treatment the heart is able to make stronger contractions The heart is now able to empty the cavities completely during systole, and concomitantly the diastole is prolonged. In this way the heart is relieved of the constant over pressure which acted on the inner surface of the cavities, inviting the muscle to insufficient contractions The effect is noticeable Many others have attempted to explain the effect of the baths by the derivation of the blood to the skin and muscles, in this way a relief of the heart may be produced, but in Dr Schott's opinion this does not explain the immediate benefit of the baths The effect of the bath is much weaker, but more enduring The effect of the exercises is more energetic and less lasting There is a diminution of the congestion in the pulmonary system as well as in the venous system a decrease of hepatic congestion and a reduction in the cyanosis and a decrease in the frequency of the pulse In consequence of the increased quantity of the blood thrown into the arterial system the sphygmograph shows higher pulsations and a prolonged diastole A later circumstance is restoration of the heart muscle

The effect of the measures may be shown by percussion Radiograms are valuable but the difficulty of getting the patient in the same position is liable to lead to a variety of errors Auscultation discloses a change in the cardiac signs, the weak signs become audible, a murmur produced by insufficiency becomes a normal sound, a murmur which was not audible becomes so The apex beat moves upward and inward, this with a simultaneous rise in the level of the diaphragm shows that the heart has been improved The effect is similar to the effect of digitalis, but the injuries of digitalis are avoided The strengthening of the heart is produced by the disappearance of congestion in the venous system and by an increased amount of blood in the arteries, owing to this fact the blood that flows into the coronary arteries is more highly oxygenated and the heart is better nourished Dr Schott has made investigations of the changes of the blood during this treatment and showed that in those cases where the amount of hemoglobin was diminished it became increased by the treatment in question

Dr Schott emphasized that careful individualization is necessary in the treatment It is very often advisable to observe the patient before, during, and after the bath Nauheim baths contain 2 to 3 per cent of sodium chlorid and about the same percentage of calcium chlorid The percentage may be diminished or increased by the addition of mother lye. The duration of the bath should not be more than 10 minutes at the beginning The temperature, 95 F, must not be exceeded, otherwise the tonifying effect on the heart might fail to appear If the patient remains quiet he may feel a sensation of chilliness, later he has a feeling of comfort But should this feeling of comfort not be obtained within a minute the temperature of the bath should be raised The patient should have a feeling of comfort while in the bath A secondary chilliness should be avoided. If it occurs it means that the bath was of too low temperature or too prolonged Either the temperature must be raised or the patient leave the bath immediately On the following day the bath must be taken warm If the patient bears the treatment well, more concentrated baths may be given by increasing the per cent of calcium chlorid

Later on the patient takes the baths containing carbonic acid, beginning with a weak per cent of the gas These are the effervescent baths or sprudel baths In sprudel baths there is free carbonic acid gas In strong sprudel baths the water flows in and out with an excess of pressure over the atmosphere The duration of these baths may be increased to 20 minutes, but not beyond that After the bath the patient should be rubbed to a glow, then he should remain in bed for an hour

The baths should be given progressively cooler, longer, and more frequently The strict supervision of the conditions of the bath should be kept up uninterruptedly The effect of the last bath is a guide for the next The beneficial action is brought about by the mineral constituents, especially calcium chlorid, which acts on the peripheral nerves, by the carbonic acid gas and by the temperature The summer months are most suitable for the treatment Two to four weeks are advisable for moderate cases An after period of rest should follow In winter the patient should seek a southern climate

Many mistakes arise in the application of the artificial Nauheim bath The carbonic acid is not the only constituent that acts on the heart, all the ingredients are necessary It is evident that constant medical supervision based on long experience is necessary The patient must be relieved of family and business worries, a suitable diet is also of importance. In some cases excellent results may be obtained from the artificial Nauheim baths The number of successful cases must be limited because the strongest Nauheim effervescent baths can not be made artificially

Graduated gymnastic exercises act through the motor apparatus, the baths through the sensory apparatus The following principle may be considered in the application of gymnastic exercises Each exercise must be performed slowly, and resistance must be so regulated that the patient is always in condition to breathe freely, fatigue must be avoided, this is best avoided by exercising alternate groups of muscles, the pulse must be watched A bedridden patient may perform these exercises and become able to get about In some cases in which digitalis had been used extensively it ultimately proves inefficient, whereas in combination with baths and exercises it again produced its effect

After the conclusion of the treatment by exercises the patient should resort to mountain climbing, but only when the heart muscle is strong enough The powerful effect on the heart indicates in what cases this treatment is inapplicable They are aneurism of the heart and large vessels cases of advanced arteriosclerosis and degeneration of the heart muscle Every increase in muscular action becomes dangerous in these cases, as it might lead to rupture of the aneurismal sac, or produce apoplexy or embolism The application of cold is also a good means of quieting the heart's action In cases requiring immediate stimulation high temperature baths should be used over the entire chest Until recently electricity was mainly used to quiet the heart's action

A mixed diet is to be preferred, nourishing and easily digestible food, no spicy dishes or effervescent beverages should be used The consumption of any great amount of liquid should be avoided for a distended stomach pushes the heart upward and impedes its action, the heart having to struggle against an increased abdominal pressure When this pressure already exists it may be made to disappear by combining a lime water cure with the diet The use of tobacco should be greatly restricted or entirely discarded

The discussion on this paper was participated in by Drs H F Vickery, C F Withington H D Arnold R C Larrabee, Joseph H Pratt and E P Gerry, who joined in complimenting the essayist and endorsing the value of [illegible] ment described by him

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and methods of treatment for the diseases seen especially in every-day practice Contributions will be welcomed from our readers.]

Typhoid Fever

(*Concluded from page 545*)

Continuing the subject, Thayer describes in detail the methods of sterilization of excreta

Sterilization of the Urine—The simplest and best method of sterilizing the urine, he states, is to place about 200 c.c of a solution of 1 to 1,000 bichlorid of mercury in a large jar, which should always be kept covered The urine should be poured directly into this jar This amount of bichlorid would be sufficient to sterilize 3,000 c.c of urine The amount should be left standing until two hours after the urine has been added. Another vessel should be provided containing a 1 to 100 solution of bichlorid of mercury or a sufficient quantity of a 1 to 20 solution of carbolic acid, in which the urinal may be immersed during the period when it is not in use A urinal which is used for a typhoid patient should not be used for others without previous sterilization Urotropin (hexamethylenamin U S P), does not sterilize the urine It does, however, prevent the multiplication of bacilli in the urinary passages and is an important help This drug may be given in doses of about 2 gm (gr xxx) a day, divided into three or four doses

Sterilization of the Feces—The most satisfactory method of sterilizing the feces Thayer states is to add to the dejection about twice its volume of a 1 to 20 solution of carbolic acid, this is stirred up thoroughly and allowed to stand at least for two hours The bedpan should be thoroughly washed out with carbolic acid and kept immersed between the periods of use unless it be sterilized by boiling or heat The feces should be kept in the mixture for at least two hours.

Sterilization of the Bath Water—This is accomplished by adding to each bath tub about half a pound of chlorid of lime which will thoroughly sterilize the water in half an hour

Sterilization of the Linen—All linen should be soaked in a 1 to 20 solution of carbolic acid for about two hours before sending to the laundry If, however it is put directly into the boiler the same end may be served

Sterilization of Dishes and Utensils—All dishes should be sterilized thoroughly by boiling

SUPERVISION OF THE PATIENT UNTIL HIS EXCRETA ARE FREE FROM BACILLI.

This is a demand impossible to meet without skilled laboratory assistance In the absence of this we must continue all precautions till the discharge of the patient warning him when he leaves our hands that unless he exercises care in the disposition of his excreta he may be a source of danger to those about him Happily, the great majority of patients are by this time free from bacilli If these measures were carried out strictly in every case typhoid fever could be eradicated from the community There are however various difficulties in the way chiefly because of the fact that many cases of mild walking typhoid are unrecognized and that some other convalescents excrete typhoid bacilli in their urine and feces for months

Local Treatment in Diphtheria.

Bourget in *Revue Internationale de Clinique et de Therapeutique* and *Journal de Medicine de Bordeaux*, recommends the following local treatment in this condition As soon as the patient with pharyngeal diphtheria enters the hospital his throat is swabbed with the following mixture

℞ Liquoris ferri chloridi
Pulv alumnis
Acid borici, āā 3i 4
Glycerini 3x 40
M et ft sol

This is to be thoroughly applied by means of a tampon to the back of the throat and the whole affected area The applications are to be repeated every few hours, using, of course, a fresh tampon each time Five or six applications are made at each sitting, and these are repeated hourly, if necessary, or every two hours A few minutes after each treatment the patient uses the following gargle

℞ Tincturæ krameriæ
Tincturæ guaiaci, āā ʒi 30
M.

Two teaspoonfuls of this mixture are placed in a glass of warm water and this quantity is used in rinsing the mouth and throat By proceeding in this manner a marked improvement is soon apparent in the general condition of the patient Often the fever ceases on the third or fourth day

Baginsky, in *Modern Clinical Medicine*, describes the local treatment of diphtheria as follows The former severe mechanical and chemical measures used to remove the membrane are not in vogue to so great an extent at the present time If used they are employed for the purpose of destroying the bacilli and thus preventing the further production of toxins, as the bacillus is not influenced in its property of life by the serum For this purpose the following may be used

℞ Potassii permanganatis gr xxx 2
Aquæ dest Oii 1000
M. et ft sol Sig Use to gargle the throat as directed

Or

℞ Hydrargyri chloridi corrosivi gr ss .03
Aquæ dest ʒii 60
M et ft sol Sig Paint on the affected parts with a soft cotton swab from two to four times a day

Or

℞ Hydrargyri chloridi corrosivi gr ss .03
Ichthyoli m l 3.30
Aquæ dest ʒii 60
M et ft sol Sig Paint on the affected parts with a soft cotton swab as directed

This preparation Baginsky considers especially valuable as ichthyol is said to kill the cocci that are present whereas the corrosive sublimate has a more selective action on the bacilli

Rotch and Caille do not recommend the vigorous local treatment of this condition by swabbing with either strong or weak solutions, but rather give preference to the method of cleansing the nose and throat by irrigating with mildly antiseptic solutions Caille thinks the best way to cleanse the nasopharynx is to pour liquid into the nose from a spoon If the nose is partly or almost completely stopped up a blunt piston syringe or a fountain syringe may be used The irrigations may be done every hour or two, depending on the severity of the case

Rotch describes his method of irrigation as follows The method of irrigation by the fountain syringe may be employed for either nose or throat, except that a larger glass nozzle should be used for the throat The child should lie on its side and the watery solution should be made to pass up one nostril and down the other until the stream runs clear In some cases the child prefers to sit up for irrigation Ordinarily the irrigation should be used every two or three hours, with longer intervals at night If the child resists the treatment it may be well to lengthen the intervals or to omit it for a time, in order to preserve the child's strength A similar method may be used for the throat and is of great comfort to the patient

The following solutions are recommended for the irrigation

℞ Sodii chloridi 3i 4
Aquæ dest Oi 500
M Sig Use as irrigating fluid

Or

℞ Acidi borici ʒiv 15
Aquæ dest Oi 500
M Sig Use as irrigation for nose two to four times a day

Or

℞ Potassii permanganatis gr iii .18
Aquæ dest Oii 1000
M Sig Use as irrigation for nose and throat as directed

Or

℞ Hydrargyri chloridi corrosivi gr i.ss .09
Aquæ dest Oii 1000
M Sig Use as irrigating fluid for the nose and throat

Book Notices

A History of the Boston City Hospital from its Foundation Until 1904 Authorized by the Trustees and Edited by a Committee of the Hospital Staff David W Cheever M D George W Gay M D and others Cloth Pp 422 Boston Municipal Printing Office, 1906

The history published by the authority of the hospital covers a period of 40 years since 1861, the date of the foundation of a municipal hospital in Boston, and forms very interesting and instructive reading The expense for the first building was limited to $100,000 The total of the present properties of the hospital are assessed at $3,061,500 The bed capacity of the hospital in 1864 was 208, in 1906, 615, the appropriation for maintenance in 1865 was $66,789 04, in 1905, $486, 776 88 It will thus be seen that not only the number of patients, but the expense per patient has materially increased The hospital was located in a somewhat insanitary portion of the city, but considerations of economy and expediency prevailed at that time and have prevented a change of location An objection at the time of its foundation was its great distance from the center of population, but the growth of the city and the incorporation of suburbs now makes the hospital conveniently central In speaking of the ventilation of the hospital basement a curious error appears The writer of this chapter, Dr G H M Rowe, superintendent of the hospital states that carbon dioxid gas was found in as high a proportion as 5 to 6 per cent Reference to the reports of the Massachusetts State Board of Health for January, 1899, however, (from which, we learn, Dr Rowe derived his statistics) show that the figures are misquoted, being five to six parts in 10,000, or 0 05 to 0 06 per cent In addition to the hospital proper the buildings include out patient buildings, an emergency relief station in the central part of the city, and a south department for infectious diseases The hospital buildings also include a nurses' home and a medical library building for the use of the house and attending staff, the library containing 4,000 volumes, mostly of the latest books, as well as the classified clinical records of the hospital, which have been the basis of a considerable amount of valuable medical literature, as witness the Medical and Surgical Reports of the Boston City Hospital A striking feature of the record of the management of the hospital—not to its credit—is the persistent refusal of admission to women medical students

The history, which is freely illustrated, gives an account of the medical staff which has served the hospital from its inception and includes many eminent men The reminiscences of some of the attending and house physicians emphasize the contrast between present aseptic surgery and the practice as it existed before the introduction of Listerism Succinct accounts are given also of the trustees and superintendents of the hospital, of the inception, growth and present status of the various departments in the institution, of the training school for nurses the libraries, the gifts and bequests, the methods of teaching, etc The reader is impressed with the long and continuous periods of service of many of the members of the board of trustees, which from the beginning has been small and compact The fact that the hospital since its beginning has had but three superintendents, the present incumbent having just completed a quarter of a century of "especially faithful and notable service" is also noteworthy and in striking contrast to the frequent, disturbing changes that heretofore have marked the management of so many other American municipal hospitals A similar permanency of service has been the case also, at least to a large extent, with the members of the attending staff, two of the original members—David W Cheever and John G Blake—still remaining The progressive, harmonious development of the hospital and its present high degree of efficiency and completeness in organization and equipment must be ascribed in large measure to this continuous service of faithful officers—who can doubt the wisdom of this system?—the result being a stable and skilled management The hospital staff enjoys the privilege of nominating power, put in their hands by the trustees, to fill vacancies in their number Teaching was begun four months after the opening of the hospital and has not ceased but been amplified continuously ever since This history is, in short, a truly remarkable record of public spirit and civic intelligence worthy of the close study and active emulation of the officers of every American municipal hospital The true functions of a hospital are essentially threefold, namely, to care for and properly treat sick and injured human beings, to instruct students of medicine, and to study and investigate to the end that knowledge and control of disease may increase The Boston City Hospital has given an account of the manner in which it has performed and now performs these functions that brings credit to Boston and will be of great value to sister communities

The Dissociation of a Personality A Biographical Study in Abnormal Psychology By M. Prince M.D Cloth Pp 569 Price $2 80 net. New York Longmans Green & Co, 1905

This is the second work that has appeared within two years on the interesting subject of multiple personality and, like the previous one, it is based on the observations of a single case The present volume is more thoroughly a case report, and the subject has been already introduced to the medical reader in one or two preliminary articles by the author The patient certainly was an extraordinary instance of a peculiar condition There were three principal personalities B I, a saintly neurasthenic, B III, a mischievous, childish character, and B IV, who was a later appearance, a more normal individual, but yet not the real Miss Beauchamp, which name the author gives to the subject of his study B I was unconscious of everything done by the personality B III and B IV B IV was similarly amnesic of the ideas and sensory experiences of B I and B III, though there was a sort of continuity of the emotional states of B I and IV to some extent, while B III, or "Sally," was perfectly conscious of the doings of the other two and even knew the thoughts of B I and later those of B IV B II was a hypnotic condition which plays but a small figure in the history "Sally" derived a malicious delight in tormenting her co personalities In the later portions of the history B I and B IV are synthesized into the real Miss Beauchamp and "Sally" goes out of existence, at least temporarily In addition to the three principal personalities there are a number of modified conditions of fatigue, semi somnambulistic states, etc., and the author uses diagrams like the graphic formulæ of chemistry to represent the various personalities and auxiliary side chain conditions in the relations to each other The report of the case is most thorough and the author introduces various letters and writings of the different personalities which illustrate their differences and peculiarities Altogether it is a remarkable work of its kind The story is told in a picturesque way and the tragi comic complications due to the machinations of "Sally" are very strikingly put before the reader The real personality which finally develops is perfectly conscious of the doings of B I and B IV, but not of those of the mischievous B III except indirectly, and the latter has disappeared except in special conditions of ill health, and it is not possible at the date of the author's final writing to say what part, if any, she plays in the subconsciousness of the restored normal individuality or whether, in fact, she exists as a sub personality at all Cases of alternating personality are not so uncommon, but that instances have been under the observation of most neurologists of extensive experience The case here related is, however, so far beyond the average that its publication is a somewhat noteworthy contribution to the literature of these rather obscure psychological phenomena The author promises to complete his study in another volume in which he will discuss the theory of this case and of disintegrated personality in general, and the various normal and abnormal conditions of the subconscious in human cerebration

A Text Book of Pharmacology and Some Allied Sciences (Therapeutics Materia Medica Pharmacy Prescription writing Toxicology etc.) together with outlines for Laboratory Work etc By T Sollmann M D Professor of Pharmacology and Materia Medica in the Medical Department of Western Reserve University Cleveland Ohio Second edition thoroughly revised and enlarged Cloth Pp 1070 Price $4 00 net Philadelphia W B Saunders Company 1906

The five years that have elapsed since the publication of the first edition of this valuable text book have been marked by great activity in pharmacologic [illegible] details

have been added to our knowledge and so many of our conceptions have been modified that the author has deemed it desirable not merely to revise, but practically to rewrite the book in order to make it representative of the present state of science That this has been thoroughly done is shown by the frequent references to recent work The author remarks that perhaps disproportionate space has been given to some of the newer remedies, but this can not be regarded as a fault since a critical treatment of these preparations is much needed at the present time The section dealing with laboratory work has been entirely remodeled. It has been found not only desirable, but quite feasible, to teach pharmacology largely by the laboratory method, and, indeed, to make this the basis of, rather than an adjunct to, the instruction The description of the technic and apparatus has been elaborated so as to form a guide for the beginning investigator, as well as for the instructor A useful bibliography which is of necessity incomplete, but gives references to the latest work, has been appended Materia medica is revised to accord with the new U S Pharmacopeia and the more important preparations of the National Formulary are introduced The treatment of proprietary remedies is very judicious They are indexed under their trade name to facilitate reference, but in the text they are almost uniformly referred to under their proper chemical designation with the trade name in parentheses The attention given to toxicology is unusual in works on materia medica, but is a useful addition A general chapter treats of the methods of toxicologic analysis and of the treatment of poisoning and the toxicology of each article is given separately, including the symptoms and treatment of chronic poisoning and drug habits Such a treatment brings this subject into the relation with pharmacology and therapeutics where it properly belongs The minor details of pharmacy, including prescription writing, dosage, the use of flavoring agents, etc., are given a place to which their great practical importance justly entitles them The subject of flavoring medicines, which is largely neglected in other works on materia medica, is given 12 pages, mostly in fine print A very instructive section on the "Historical Development of Therapeutics" is included in the introduction to pharmacology

This volume is adapted to the double purpose of the instruction of students and the information of the practitioner wishing light on the conclusions of modern science in regard to the action of drugs and the methods by which such conclusions have been formed. By the use of display type the main facts are made prominent, and the details of research are to a large extent placed in smaller type Therapeutics is based as far as possible on physiologic action, and the conclusions in many cases ought to correct notions long current among practitioners For instance, the rational use of uric acid solvents is limited to irrigation of the bladder to dissolve calculi Given internally they can be of no service because of the presence of sodium in the blood and urine The stimulant action of alcohol is explained as illusory, while it is not denied that it may be of service therapeutically

A careful perusal of this work will repay not only the student and the instructor in materia medica, but also the general practitioner, who should gain from it the conviction that the science of pharmacology, or the action of medicine as determined by experiment, must form the chief foundation for a rational use of therapeutic agents

DISEASES OF THE NOSE THROAT, AND EAR By C P Grayson A M M D Clinical Professor of Laryngology in the Medical Department of the University of Pennsylvania etc. Second edition revised and enlarged Cloth. Pp 532 Price $4 00 net. Philadelphia Lea Brothers & Co, 1906

The author attempts to deal with a large subject in a comparatively small space In so doing he has sometimes strayed far from the proportion that would seem correct to the experienced laryngologist. He has not presented much that is new, but has redressed the old in an attractive form, although in some places much space has been occupied by what is of no interest to the practitioner of experience and by what seems of little value to the student For example, under the treatment of chronic rhinitis we find the following which although true enough, does not appear of great value, partly for the reason that he makes no special application of the facts mentioned to the relief of the disease under consideration "There is no mystery about the success that comes of being thorough, nor is there anything surprising in the inevitable failure that attends carelessness A great deal of tact must usually be employed in persuading men to reduce their allowance of tobacco and alcohol, and women their sweets and coffee and tea The excessive use of the latter two articles is much more common than may be usually supposed and always should be inquired about Our greatest difficulty in the general management of the patient, however, will be encountered in the effort to overcome the habit of overeating and the indisposition to take the proper amount of exercise It will not be one or a dozen warnings that will correct these matters, but our inquiries and protests must be repeated again and again until the patient is weary of his own weakness and can not excuse his indiscretions by any indifference to them on our part Having, so far as possible, cleared from our path all these obstructions to a successful issue, we are ready to attack the disease locally"

The book contains many good illustrations copied from Laurens and others, though one copied from Laurens, page 212, showing the method of transillumination of the maxillary and frontal sinuses, gives an entirely erroneous view There are a few colored plates, one of which, representing the appearance of the naso pharynx in empyema of the sphenoidal sinus, is deserving of special commendation As a whole the book may be commended to laryngologists for casual reading, but we can hardly recommend it to the student as a complete guide

HISTORY OF THE NEW HAMPSHIRE SURGEONS IN THE WAR OF THE REBELLION By C. P Conn A M M.D. Published by Order of the New Hampshire Association of Military Surgeons 1906 Cloth Pp 558. Concord N H Ira C Evans Co Printers

This book consists of a compilation of life sketches of the various men who served either as regular or contract surgeons during the Civil War or who became physicians after their term of army service had expired Dr Conn has used General Ayling's *Register* freely, to which he gives due credit Many names, however, have been introduced that are not to be found in the *Register*, as the history is a much later compilation and Ayling's work did not embrace contract surgeons Each New Hampshire regiment is taken up separately in numerical order and a brief abstract of the history of each regiment given, followed by the individual histories of its surgeons After dealing with the various infantry regiments the cavalry and heavy artillery are briefly considered The work includes also those physicians of New Hampshire who became United States Volunteers and were commissioned for special work along the line of medicine and surgery The records of the New Hampshire men who served in the United States Navy were obtained from the Navy Department, and mention is made of the fact that soon after the war closed one of New Hampshire's sons became surgeon general of the United States Navy, the highest official position in that department which our country can bestow on the profession The book will prove particularly interesting to those of the profession who were in any way connected with the Army or the Navy during the Civil War The general reader will find many anecdotes and interesting descriptions to enliven what might otherwise prove dry reading

OUTLINES OF PRACTICAL SANITATION For Students, Physicians and Sanitarians. By H B Bashore, M. D Inspector for Pennsylvania Department of Health First edition, with forty two illustrations Cloth Pp 208 Price, $1 25 net New York John Wiley & Sons, 1906

The author has departed from the beaten track of the usual text book on sanitation and subjects are introduced which are of interest not only to health officials, but to the laymen, for example, the topics of milk and food supplies, car sanitation, etc All the subjects considered are dealt with concisely and clearly, the limited scope of the work precluding any lengthy dissertations The chapter on the cause and prevention of contagious and infectious diseases is excellent The author's views are in consonance with those of advanced thinkers and practical sanitarians This little work is commended

State Boards of Registration

COMING EXAMINATIONS

MAINE Board of Registration in Medicine Common Council Room Portland March 5 Secretary, Dr W J Maybury Saco

MASSACHUSETTS Board of Registration in Medicine Room 15 State House Boston March 12 13 Secretary Dr Edwin B Harvey Room 159 State House, Boston

CONNECTICUT Medical Examining Board (Regular), City Hall New Haven, March 12 13 Secretary, Dr Charles A. Tuttle, New Haven

CONNECTICUT Eclectic Medical Examining Committee State Capitol Building Hartford March 12 Secretary, Dr George A Faber Waterbury

CONNECTICUT Homeopathic Medical Examining Committee New Haven March 12 Secretary Dr Edwin C M. Hall New Haven

IOWA Board of Medical Examiners, Des Moines, March 19 21 Secretary, Dr Louis A Thomas Des Moines

OKLAHOMA Board of Medical Examiners Guthrie March 26-27 Secretary, Dr J W Baker, Enid

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Rules Governing Examinations in Arizona.—Dr Ancil Martin, secretary of the Board of Medical Examiners, sends us the following rules governing examinations for license to practice medicine in that state

1 Examinations will be held in Phoenix on the first Monday in January, April, July and October, lasting two days

2 Examinations will be conducted in writing in the English language

3 Examinations consist of 10 questions in each of the following branches 1, anatomy, 2, physiology, 3, chemistry, 4, materia medica and therapeutics, 5, obstetrics, 6, gynecology, 7, practice, 8, pathology, 9, surgery

4 In order to be admitted to practice the applicant must obtain a total average of 75 per cent, provided that in no branch shall the percentage be less than 60, except in practice, obstetrics, gynecology and surgery, in which branches the minimum is placed at 80 per cent.

5 The examination fee is payable in advance, on the first day of the examination

6 Candidates once rejected may appear at the next regular meeting of the board, with the special permission of the board only The applicant must pay full fee for the next examination.

7 Diploma and affidavits required by law must be presented to the secretary before the examination is started Blank affidavits furnished by the secretary on request.

8 No applicant known to be a habitual user of morphin or cocain will be examined.

9 Any applicant presenting himself under the influence of alcoholics will not be examined.

10 Any candidate detected trying to give or obtain aid shall be instantly dismissed from the room, and his or her paper for the entire examination cancelled

11 It is unlawful to practice in this territory while awaiting an examination, but the board will give special examinations when it is deemed advisable Applicants are cautioned against beginning practice in Arizona before they have received a license *Any physician engaged in the practice of medicine* without complying with the law, is not only subjecting himself to prosecution and punishment, but can have no protection in event of malpractice suits, nor can he collect his fees by law Any contract physician or surgeon in the employ of a mining company's work who has not complied with the law, can be of no protection to the company which employs him, for the reason that he is already violating one of the laws of the territory, and the court can not recognize him as a legal practitioner

Rules Governing Examinations in Delaware—The following rules govern examinations for license to practice medicine in Delaware

1 Questions for approval by the Medical Council must be sent to the secretary of the council at least ten days before the date of examination

After approval, the selected questions shall be printed and returned to the examiner who must retain them securely in his own possession and under no circumstances shall he allow the sealed envelope to be opened, until the time arrives for the examination on that particular subject If information relative to the examination be given to a candidate by any member of this Board of Medical Examiners it shall be the duty of said board, on ascertaining that fact, to recommend that the governor annul the commission of such member

2 Questions must be given out and answers collected punctually at the time specified on the question papers Under no circumstances will papers be accepted unless the examination be actually held at the appointed time The time for each examination paper of ten questions shall not exceed two hours

3 Explanation of questions and criticism or inspection of the answer papers during the examination are positively prohibited

4 No candidate shall, under any circumstances, communicate in any way with any other candidate, nor have books or helps of any kind, nor be permitted to question any examiner in reference to the meaning or interpretation of the question under consideration, but must rely solely on his or her own judgment as to the meaning of each question, and on his or her own knowledge of the subject in answering Any candidate violating this rule shall be debarred from that particular examination at the discretion of the examiner

5 At the close of the examination in each subject each candidate must subscribe his or her name and postoffice address to the following declaration, place it in an envelope, seal and deliver the same with his or her answer papers, to the examiner

'I now at the close of the examination in (naming the subject) declare that prior to this examination I had no knowledge of the questions to be proposed and have neither given nor received explanations or other aid in answering any of them. (Signed

This rule must be read to the applicants before the examination question papers are distributed.

Every set of answers lacking this declaration and signature however satisfactory in other respects, will be rejected, and in no case can this omission be supplied after the papers have reached the Board of Examiners

6 Any candidate detected in trying to give or obtain aid shall be instantly dismissed from the room, and his or her paper for the entire work canceled

7 If any candidate withdraw himself or herself, without permission, from the sight of the examiner, his or her examination shall be closed This rule permits a candidate temporarily ill, to withdraw from the room and return only by the consent of the examiner

8 No candidate shall, under any circumstances, enter the examination more than thirty minutes late, unless excused by the examiner, and no candidate shall leave the room within thirty minutes after the distribution of the question papers

All time lost by being absent shall be deducted from the time alloted to the examination of that particular subject.

9 The Board of Examiners shall inspect answers submitted by the candidates as soon as convenient after the close of the examination, and shall complete and report the same at the meeting of the full board, the following Tuesday

A correct set of answers to the questions of any one paper, shall entitle the candidate to the full mark for that paper, viz one hundred points, each full and correct answer rating ten points

Partial or imperfect answers shall be rated by the examiners in accordance with their degree of fulness and correctness

10 *A general average of not less than seventy five of a* possible one hundred points shall entitle the candidate to a license to practice medicine and surgery in this commonwealth, provided that he or she has otherwise complied with the law

11 Handwriting of the candidates must be legible Proper punctuations and use of capital letters and general appearance of examination papers will be considered in marking answers

Method of Conducting Examinations in Pennsylvania—Dr Henry Beates, Jr, president of the State Board of Medical Examiners, sends us the following statement of the method of examining applicants for license to practice medicine in that state

Under the Act of the Assembly governing the practice of medicine, as it at present obtains candidates, because of the large classes are examined in a hall which gives a floor space of 36 square feet to each candidate Candidates are permitted to occupy any seats they see fit to select, and on entering the room are supervised in order to see that no books or aids of any kind are in their possession

The seats are so arranged as to be under the range of linear vision of the members of the board who are stationed in certain positions and change their location more or less constantly, so as to see that each candidate is in alignment Any position other than that necessary to answer the questions writing is at once recognized and the individual out of a

ment notified that he must change his seat A second failure to comply with the exactions means expulsion Proof of cheating, in contradistinction to evidence, means, as a maximum penalty, permanent expulsion Evidence of cheating means expulsion from a given session, with the penalty of not being permitted to reappear for from six months to two years, at the discretion of the medical council, to which body action is recommended by the Board of Medical Examiners

All candidates must be in place promptly at 9 a m and must leave promptly at 12 o'clock The afternoon session begins promptly at 2 p m and terminates sharply at 5 o'clock Any candidate entering after one half hour from the beginning of the session can do so only by especial permission of the board, which examines as to the cause of lateness During the sessions candidates are not permitted to leave the room unattended

To prevent substitution candidates, when making application to the medical council and proving eligibility for examination, must supply their signature to the medical council The medical council issues an admission card and the board requires countersigning of this card The two signatures are compared I may say in this connection, that even under such circumstances substitution is more or less practicable, and would suggest that each candidate be obliged to supply a photograph of himself

Even this system can be circumvented, because a substitute engaged in ample time could supply a photograph of himself, and go through the whole system without detection It might be well to have medical students supply the dean of the college when they matriculate with photographs of themselves, and then to have state boards compare the photographs supplied by the candidates, allowing for a change of physiognomy accompanying advanced years A practical prevention of substitution is thus secured

Each candidate signs the papers handed in We do not believe it possible that partiality can be shown in grading, because the board is no more cognizant of the individual who signs these papers than would any one who would open letters in a postoffice and read the signature, have knowledge of the author of the letter so perused

A rule of importance in force is, that a candidate must not, by any quotation or other manner, indicate the school from which he has obtained his degree A candidate so doing has his papers eliminated and his examination declared void

Eligibility for examination for licensure in Pennsylvania is not determined by the Board of Examiners, but by the Medical Council, a body created under the Act of Assembly especially for this purpose If the Medical Council is satisfied with the credentials, which embody a preliminary education approximating that which is exponent of a reputable four years' high school course, and for the medical qualification a diploma issued by a reputable medical college after four years of medical study, it issues a card of admission to such candidates, and notifies the board of its action At the session of the board the candidates to be admitted must present this card

The question of proof of moral character is provided for in the Act of Assembly, but should receive more careful attention than it does Experience shows that some of our licentiates have degenerated into quackery and various forms of charlatanism, and it is hoped that the state of Pennsylvania will be able so to amend its act as to empower it to revoke the license of such a type of characterless licentiate

NOTE.—Since the above was received the following letter has come to us

To the Editor —The Medical Council of Pennsylvania has unanimously adopted a rule which I think of sufficient value to warrant presentation to the profession at large through the columns of THE JOURNAL. It is that in the subject of chemistry in the examinations for licensure questions shall be specifically and therefore legally those of chemistry *only as applied to medicine* and not as a science

I regard this as a very important advance for it certainly is not right to expect of physicians making application for examination for licensure an examination in the domain of the science of chemistry Perusal of questions of various state boards demonstrates that questions in manufacturing chemistry absolutely foreign and remote to the chemistry of medicine and in no sense a test for qualification to practice medicine or surgery are frequently submitted This is eminently unfair certainly is not legal and is so demoralizing to candidates when before an examination of so vital importance to them as to render them incapable in a large measure of doing themselves justice

The Medical Council has also ordered that beginning with the June session of the State Board of Medical Examiners, 1907 candidates must supply photographs of themselves signed by the deans of the colleges from which they have graduated, and countersigned by themselves. Recognizing the impracticability of older practitioners complying with this requirement an especial provision is made for this class of examinees which provides that they shall supply photographs signed by themselves and file affidavits to the effect that the long time since they have graduated or whatever other impracticability may be set forth, prevents the complete fulfillment of the requirement being observed

It is reported, and probably based on excellent authority, that renegade physicians have been paid to go through the entire medical course of four years in order to obtain the degree and of course complete the conspiracy when supplying that same photograph to State Boards of Medical Examiners To obviate this possible fraud and to insure identification of the licentiate with the license I believe it would be an excellent plan to compel state licenses to be so prepared that a photograph of the licentiate should be taken thereon This would doubtless effectually stamp out the criminal practice of substitution or impersonation

HENRY BEATES, JR

Georgia October Report.—Dr E R Anthony, secretary of the Board of Medical Examiners (Regular), reports the written examination held at Atlanta, Oct 9, 1906 The number of subjects examined in was 10, total number of questions asked 50, percentage required to pass, 75 The total number of candidates examined was 27, of whom 26 passed and one failed The following colleges were represented

PASSED			
College.		Year Grad	Per Cent
Atlanta Med. Coll *		(1898)	76
Atlanta Coll of P and S		(1906)	79 82
International Med Miss Coll		(1906)	75
University of Kentucky		(1906)	79, 83
Louisville Med. Coll		(1906)	83
Tulane University		(1906)	82
Marion Sims Med Coll **		(1899)	80
Leonard Med Coll		(1906)	80
North Carolina Med Coll		(1906)	80
Miami Med Coll		(1905)	83
Jefferson Med Coll	(1903) 95	(1906)	82
Univ of Pennsylvania		(1904)	81
Chattanooga Med Coll		(1906) 78	80
Meharry Med Coll	(1905) 78	(1906) 76 84	86
Univ of Nashville		(1905)	75
Vanderbilt University		(1906) 81, 84,	85
Memphis Hosp Med Coll		(1906)	81
FAILED			
University of Georgia		(1905) †	

* United with Southern Medical College in 1898 to form Atlanta College of Physicians and Surgeons

** United with Beaumont Hospital Medical College in 1901 to form Marion Sims Beaumont Medical College

† Percentage not given

Iowa December Report.—Dr J F Kennedy, secretary of the Iowa State Board of Medical Examiners, reports the written examination held at Des Moines, Dec 11 13, 1906 The number of subjects examined in was 8, total number of questions asked, 100, percentage required to pass 75 The total number of candidates examined was 5, of whom 2 passed and 3 failed Fourteen reciprocal licenses were granted at this examination The following colleges were represented

PASSED		
College	Year Grad	Per Cent
College of P & S Chicago	(1906)	80
Tufts Coll Med School	(1903)	77
FAILED		
Keokuk Med Coll Coll of P & S	(1906)	56 60
St Louis Coll of P & S	(1906)	59

REGISTERED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Hering Med Coll	(1906)	Illinois
Rush Med. Coll	(1905)	Illinois
College of P & S Chicago	(1905)	Illinois
Northwestern University	(2 1905)	Illinois
Med. Coll of Indiana	(1905)	Indiana
Keokuk Med Coll Coll of P & S	(1892)	Nebraska
University of Michigan	(1906)	Michigan
Ensworth Central Med Coll	(1905)	Kansas
St. Louis College of P & S	(2, 1906)	Illinois
University of Nebraska	(1905)	Kansas
Jefferson Med Coll	(1904)	Maryland
McGill University Quebec	(1889)	Minnesota

Indiana Reciprocity Report.—Dr W T Gott, secretary of the Indiana State Board of Medical Registration sends us a report of physicians licensed through reciprocity during 1906 The following colleges were represented

College.	Year Grad	Reciprocity with
College of P & S Chicago (1902) Wisconsin	(1905)	Illinois
Rush Med Coll (1905) Wisconsin	(1902)	Kansas
Iowa College of P & S	(1898)	Iowa
Chicago Homeo Med Coll (1882) Nebraska	(1888)	Iowa
Kentucky School of Medicine (1887) Kansas	(1889)	Kentucky
Louisville Medical College	(1890)	Kentucky
Hospital Coll of Med, Louisville	(1897)	Kentucky
Baltimore University	(1899)	Maine
University of Michigan (1902)	(1905)	Michigan
St Louis Coll of P & S	(1903)	Iowa
Bellevue Hospital Med. Coll	(1876)	Illinois
Med Coll of Ohio (1878) Illinois	(1882)	Ohio
Toledo Med Coll	(1905)	Illinois
University of Wooster Cleveland	(1888)	Ohio
Ohio Med University	(1905)	Ohio

Georgia Reciprocity Report.—Dr E R. Anthony, secretary of the Board of Medical Examiners (regular), sends us a report of physicians licensed through reciprocity during 1906 The following colleges were represented

College	Year Grad.	Reciprocity with
Columbian Univ Washington D C	(1902)	Dist. Colum
University of Maryland	(1906)	Maryland
Cincinnati Coll of Med and Surg	(1889)	Indiana
Univ Coll of Med Richmond	(1903)	Virginia
Medical Coll of Virginia	(1901) (1905)	Virginia

Discussions

LICHEN PLANUS OF THE ORAL MUCOSA

(*Continued from page 562*)

DISCUSSION

DR L DUNCAN BULKLEY, New York City, said that a few years ago lichen planus was described as an affection which was confined to certain areas, especially the hands and wrists More recently, a further study of the subject has shown that the eruption may involve all parts of the body Dr Bulkley said he believes that he was the first to describe two cases in which the affection was observed on the glans penis before involving any other part of the body The lesions in those cases were characteristic, and had existed for some months before the patients sought treatment Lesions finally developed elsewhere on the body, and there could be no mistake in regard to the diagnosis He has since seen a number of similar cases Occasionally he has observed the lesions on the tongue and inside of the mouth, as well as on other mucous surfaces Dr Bulkley said that arsenic is one of the most valuable remedies to control the lesions of lichen planus provided it is taken in full doses and continued for a sufficiently long time How the drug acts is not known, but it certainly has some controlling influence over the development of the lesions The fact should be borne in mind, however, that every case of lichen planus does not improve with the use of arsenic, and in some instances it even aggravates the affection Cases have to be treated more or less along general lines He called attention to a method of treatment introduced thirty years ago or more by the elder Dr Boeck of Norway, who regarded lichen planus as a disease of sub oxidation, and on empirical grounds suggested the use of chlorate of potash in from 5 to 10 grain doses, taken directly after meals, and followed in the course of half an hour with 5 or 6 drops of strong nitric acid, well diluted Dr Bulkley said that he is strongly convinced of the value of this treatment, and has resorted to it in many cases with the greatest degree of success Later in the course of the disease it may be necessary to give arsenic, or the arsenic can be alternated with the chlorate of potash and nitric acid

DR JAMES C WHITE, Boston, asked Dr Lieberthal if he had noticed whether the lesions in the mouth showed any tendency to maceration

DR HENRY G PIFFARD, New York City, said that the chlorate of potash and nitric acid treatment of lichen planus to which Dr Bulkley referred, was introduced about 25 or 30 years ago by Dr Robert W Taylor (*Archives of Dermatology* January, 1875)

DR. DAVID LIEBERTHAL, Chicago, said that it was a well known fact that acute lichen planus will not heal under the use of arsenic. Besides other cutaneous symptoms, arsenic produces hyperemia and exudation, especially in places which are the seat of pathologic changes Therefore it not only does not beneficially influence acute lichen, but, on the contrary, sometimes acts unfavorably Dr Lieberthal said that he would regard acute lichen planus as an acute dermatitis and treat it accordingly In reply to Dr White's question he said that there was no maceration in the strict sense of the word in any of the lesions The lesions on the cheek at a certain stage were somewhat flattened and looked as if they might be the seat of some maceration

A SERIES OF AFFECTIONS TREATED BY ARTIFICIAL AUTOINOCULATION

(*Continued from page 577*)

DISCUSSION

DR L HEKTOEN, Chicago said the idea which underlies therapeutic inoculations in infectious diseases is by no means new, although we owe our present interest in this method of treatment to the recent efforts of Dr Wright In 1833 a German physician wrote a monograph in which he supported the idea expressed in the title that all contagious diseases contain in their contagion the materials necessary for their healing He called attention to precautions which should be borne in mind when we judge the results of therapeutic inoculation The cases that are treated by this method are comparatively few, isolated, and relatively scattered, so that it will take a long time before we can have adequate material for statistics from which accurate deductions can be made, such as for instance, in a disease like diphtheria Many of these diseases that are being treated with therapeutic inoculations sometimes undergo rapid, mysterious or spontaneous cures In support of this statement he referred to an instance of furunculosis in a physician who presented himself for treatment some time ago In order to prepare himself for the treatment, the physician thought it best that he should go home When he arrived home the disease disappeared spontaneously Now, if this patient had received one single inoculation we would naturally have attributed the result to the effect of the inoculation The beneficial results obtained in many cases of tuberculosis must also be judged with this idea in mind Speaking of tuberculosis, he began the treatment of this disease according to Wright's method, under the guidance of the opsonic index, nearly a year ago During the succeeding time he has had perhaps 15 cases of various forms of tuberculosis under treatment Two of these cases are regarded as cured One is a case of abdominal tuberculosis, another, a case of tuberculosis of the sacro-iliac joint, with fistulous tracts In both of these a symptomatic cure has been fully established The sinuses have all healed These patients have received no other treatment than tuberculin injections at intervals of 10 to 12 days, guided by the opsonic index, the doses being 1/1000 mg of Koch's new tuberculin In these cases the improvement was synchronous with the administration of the tuberculin and the general impression obtained by those who have followed the cases is that the treatment has produced very marked and beneficial effect He has had two cases of urinary tuberculosis, one of which has been under treatment for several months In this case there has been very marked general and local improvement The tuberculin was administered in the same manner as mentioned, and was followed by prompt subjective improvement, namely, by fall of temperature by diminution in the frequency of urination, etc The tubercular process involved the base of the bladder and the beginning of both ureters These lesions have subsided, so that at present nothing can be felt by the examining finger The second case of urinary tuberculosis has not been under treatment sufficiently long to make any definite statements about it A case of tubercular peritonitis has been treated in the hospital with tuberculin inoculations, and there has been marked local and general improvement, but it is too early to pronounce definitely as to what the final result will be in this case More recently he has taken up the study of the streptococco index in patients with scarlet fever It has been found that the streptococco opsonic index pursues a rather critical course In the beginning of the disease it is below normal then at about the eighth or tenth day it rises above normal not very high four tenths to five tenths, then gradually falls to normal again When glandular involvement takes place in the neck in the course of the disease, it is signalized by a fall in the opsonic index, and as the improvement takes place continuously or otherwise the index rises One or two cases have been treated with streptococcal vaccine and there was a marked immediate beneficial effect on the glandular infection

DR L. L. MCARTHUR Chicago confined his remarks very largely to the clinical aspect of the opsonic index and opsonic theory as applied to tuberculosis It is applicable to practi

cally all infections, but it is a method of treatment which requires trained assistants, particularly in the chronic type of infection, such as tuberculosis, before one can determine the time for the added dose This necessitates making various blood counts, stainings, etc In the course of the past three or four months he has had under his care some 30 odd cases of tuberculosis The first of these had been under his care for months and even years, and these under such therapeutic measures as the essayist has mentioned have very decidedly improved Some of them have been *symptomatically cured* He passed around some cards which showed the dates and actual readings of the capacity of the leucocytes to take up bacteria, as well as the opsonic index for six months' time A decided gain in case of tuberculosis is this It is no longer necessary to give a patient anything in order to make a probable diagnosis in the extremely doubtful cases as to whether there is tuberculosis or not, for by taking some of the patient's blood and testing it outside of the body it is possible to determine whether his index is low or not It has been his experience, without failure, in every case of positive tuberculosis, to find the opsonic index below normal He asked Dr Ohlmacher whether in any case of gonorrheal arthritis he has obtained a successful culture from the joint he has aspirated for the purpose of making an autogenous vaccine In these infections it is considered that the fluid of the joint is fairly free from the organisms, and they are found beneath the synovial membrane much as in cases of purulent urethritis, gonococci are found beneath the mucous membrane of the urethra in the submucous tissue He believes we are at the threshold of a great advance

Dr John C Hollister, Chicago, said that when one spends two or three weeks in Wright's laboratory at St Mary's Hospital, in London, and attends his clinic in the afternoon, which is held two or three times a week, and follows the progress made in the clinical aspect of cases in that short time, he is impressed with the results obtained by Wright's treatment If we take the series of cases reported by the essayist, and the series of 34 cases reported by Turtin and Parkin in the *Lancet*, Oct 27, 1906, the results are universally good In other words, the essayist had brought before the society a systematic therapy that has wrought universal improvement in the class of cases mentioned The opsonins, which are physico chemical bodies, so act on the invading microörganism as to make the organism more subject to phagocytosis, to the taking up of that microörganism by the polymorphonuclear leucocytes Wright has developed a method for increasing the opsonic power of the serum The entrance of the germ increases the opsonic power of the serum Why, it is not known In a joint article by the speaker and Dr McArthur they have reported eight cases of surgical tuberculosis in conjunction with Bier's cupping apparatus in which the results thus far have been encouraging In surgical treatment to day it is very essential to combine a general surgical technic with not only the Bier cupping apparatus in passive hyperemia, but with the vaccine treatment, such as Wright has advocated As to local reaction, the injection of tuberculin has no local reaction In the injection of staphylococcus he has found almost universally that a small area is tender, swollen, attended with pain in the arm or in the axilla As to a general reaction, they have given, up to within the last three weeks, all their cases tuberculin without any general reaction, except in one or two cases He reported a good result in a case of cervical Pott's disease, with fistula

Dr R W McClintock, Chicago, gave the results of his experience in treating cutaneous pus infections He has treated in the last year about 18 cases, and 10 of them have resulted in satisfactory clinical cures One was a complete failure This was a case in which the opsonic index was low to begin with, and the administration of the first dose resulted in such an aggravation of the symptoms that the patient refused further treatment. As a rule, he has made from four to five determinations of the opsonic index in each case and has depended on the clinical results and clinical picture to tell him the dose he should use This treatment is too promising to be restricted to tuberculosis He believes that every practitioner, with laboratory experience, can use this method successfully

Dr M Herzog, Chicago, said that the opsonins do not act on the leucocytes, but on the bacteria, making the bacteria susceptible of being taken up by the leucocytes So by opsonic index is meant a relative figure which expresses how many bacteria *are taken up by the leucocytes* The principle of the opsonic treatment depends on how many questions can be formed, how many opsonins can be taken up by the bacteria, and how many bacteria can be taken up by the leucocytes One of the co workers of Dr Hektoen has shown that virulent *pneumococci do not take up any opsonins, and hence can not* be taken up by the leucocytes The index for virulent pneumococci can not be increased If that can be shown experimentally, how can we expect, by injecting another antitoxin or vaccine into the body, to so affect the leucocytes that they will take up pneumococci, if we have no means of increasing the opsonic index? He considers it nothing short of miraculous that Dr Ohlmacher secured such a *splendid result* as he did in a case of pneumococcus infection He inquired as to what the opsonic index was in that case

Dr. L. Hektoen, Chicago, said there is a tendency to over emphasize, in our therapeutic inoculations, the fact of the opsonins When we inject a bacterial vaccine we increase the other reactive products in the body as well as the opsonins What Dr Herzog has said with reference to virulent pneumococci in the test tube is correct The same thing is true of other animal virulent bacteria, but when we vaccinate against *pneumococci* we *may produce other substances besides* opsonins that beneficially affect the infection We may produce something which, for the moment, destroys the power of the virulent pneumococci to resist opsonins There may be a point here we have not yet been able to unravel

Dr A P Ohlmacher, *Detroit, said he was much pleased* with what Dr Hektoen said concerning the streptococcal effects of scarlet fever, and he felt from the little work he had done in regard to streptococcic cellulitis and scarlet fever that *there is a field of usefulness for opsonic therapy in the latter disease* He *emphasized the necessity of using smaller doses* of streptococcic vaccine than seems to be the custom He thought many mistakes have been made in connection with the treatment of acute pneumonia by using pneumococcus vaccine in which the dose has seemed to be unusually large As to the work in tuberculosis, *the taking of the opsonic index is a mat*ter of more importance than it is in connection with many other infections On the other hand, the tuberculo opsonic index of tuberculosis is more difficult from the technical standpoint As to the results obtained, considering the difficulty of *making an emulsion of the tubercle bacillus* and in getting results from the various emulsions, he had not felt entirely secure, nevertheless, he had treated several cases, one in particular, a case of genito urinary tuberculosis, with progressive betterment Another case of diffuse pulmonary tuberculosis had responded very favorably to five injections up to the present time An autogenous vaccine is the best, as a rule, if we can obtain it In reply to a question about the strain of gonococcus, put by Dr McArthur, he said the particular vaccine he is working with was obtained from a strain that he had under cultivation ever since a year ago last September He has succeeded in keeping alive two strains for that period, one of which gave an effective vaccine, while the other did not He has worked with more recent ones, one having been isolated for a period of six weeks, but it did not give satisfactory results Finally, two or three times he has obtained the gonococcus from the patient and reintroduced it Whether the adaptation of this particular strain to the medium has something to do with the success of the vaccine or not, he was not sure But the gonococcus is an organism which excites a violent reaction when injected in the form of a vaccine He desired to impress the fact that the opsonic valuation is not imperatively necessary, at least in the common acute, subacute *and chronic infections* In *tuberculosis it is more important* A practitioner, competent otherwise by laboratory training, should not hesitate to use bacterial vaccines, because he may not be able to make a sufficient number of opsonic determinations This, he had learned, is Wright's own view concerning staphylococcus infections When we have *chronic acne* we

have, perforce, a low staphylococco opsonic index When a patient's lesions are aggravated, there is a negative phase When the lesions improve, and the general condition improves, there is a positive phase, and whenever temporary improvement abates somewhat it is time to intervene He has found some patients who seem to learn unconsciously that fluctuations occur, and they report for treatment often spontaneously As to the interval between treatment, he thought seven to ten days might be taken as an average for the ordinary subacute and chronic infections For tuberculosis, he was quite convinced that Dr Hollister is right when he says the injections should be made at shorter intervals As to how the pneumococcus acts, that question is at the foundation of the theoretical discussion of opsonic therapy, and it can not yet be answered Personally, he did not feel that Wright's theory of opsonins explains wholly the phenomena that follow therapeutic inoculations He thought, as Dr Hektoen has suggested, we will find other substances besides the one we are now pleased to style opsonins that are important in this connection But we should not hesitate to give humanity the benefit of this new method of treatment because we do not know how the pneumococcus vaccine acts on virulent pneumococci

SYMPOSIUM ON MILK FEEDING

(*Continued from page 590*)

DISCUSSION

ON PAPERS OF DRS BROWN, TOWNSEND, BROWN AND LOWENBURG

DR C F WAHRER Fort Madison, Iowa, said that any paper, no matter how scientific it may be, when clouded by details that are unnecessary and too complex to follow, except in well appointed hospital laboratories, must necessarily fail of the object an essayist has in mind A consensus of opinion on the essentials of milk modification and infant feeding by well known authors, omitting such details as every practitioner must of necessity supply in each individual case, would lead to far greater results among those who compose the rank and file of physicians, than all the algebraic formulas devised to date Experience has proved that all such formulas, aside from being too complex, are incorrect, judging from published formulas of more recent date

DR S M HAMILL, Philadelphia, said that the result of the work of the Elmira commission should act as a stimulus to those living in smaller cities and towns He has been secretary of the Philadelphia Pediatric Society Milk Commission for a number of years and has a very fair appreciation of the value of that commission to the city of Philadelphia His experience has taught him how difficult it is for the best equipped dairies to furnish good milk without the supervision of a milk commission A case in point is that of one of the Philadelphia hospitals which substituted for a very poor milk, which it had been using, the product of one of the best equipped dairies of Philadelphia, a dairy owned by a member of the board of mangers of the hospital On examination by the bacteriologist this milk was found to contain many millions of bacteria to each cubic centimeter That was milk produced in a dairy provided with the most modern equipments and presumably carefully prepared, and yet the lack of supervision which resulted in the failure to carry out the minor details of dairy farming led to these atrocious results In the examination of the dairies which have applied to the commission for certificates it has been found invariably that the bacterial content of the milk is in the hundred thousands and not until these dairies have been under the direction of the commission for some time have they been able to come within the commission's requirements Home modification of milk for an ordinary dairy is a very uncertain proposition The percentage of fat obtained from the top milk should be known The fact is lost sight of that milk coming from large herds, since the cows are milked in groups, may represent five or six different milk mixtures with great variation in the percentage of fat The only way to standardize the fat contents of the milk of a herd is by studying the fat content of the individual cows and then so to distribute them as to make the fat content of the milk of the groups milked separately as nearly even as possible It is often necessary to have the herds rearranged before a milk of fairly even fat content can be obtained At best there is always a variation of from ½ to 1 per cent. from day to day

DR J W KYGER, Kansas City, Mo, said that it is a notorious fact that the milk supply of the smaller cities, and, indeed, of many of the larger cities, is exceedingly bad Kansas City with 350,000 inhabitants, has no milk inspection of any value, and the character of the milk furnished the people is certainly very bad By stimulating interest by the appointment of milk commissions much good will be done throughout the entire country All the members returning from the meeting to the small cities, he said, should certainly look after this matter Certified milk not only in regard to solids, but in regard to the bacteriologic count, will be of immense benefit Milk commissions produce competition among dairymen, which is the only way to have them interested As demonstrated by Dr Kerley, Dr Kyger believes that starch can be digested much earlier than has been supposed Further, milk is one of the very best agents for the cultivation of bacteria He has been in the habit of using cereal mixtures much earlier than has been recommended, and believes that the muscles of the stomach can be developed as the muscles of the arm are developed

DR W G MURPHY, Hartford, Conn, related the experience of a milk commission of the Hartford County Medical Society in 1897, which was the third county medical society to establish a milk commission Two farmers were secured to supply certified milk The herd of one was high grade Jerseys, that of the other Ayrshires A 10 000 per c.c bacterial count was established and a certificate was to be given to the farmer obtaining this standard The commission immediately got into hot water If one farmer reached a standard of 10,000 and the other was higher, the one with the good results complained if the commission did not take the certificate away from the other Next month the second farmer might have a good record and the other not The commission had trouble with the physicians, finding they would use the high grade milk for a short time and then drop to cheaper milk The dairies were not supported as they should be The work, however, is progressing Dairymen are adhering to the requirements of the milk commission, although not under its control, and the work has had a good effect on the general milk supply of Hartford It is well not to attempt too much, get one good dairyman, Dr Murphy said, and work with him It is not possible for a milk commission to reconstruct the whole milk supply of a city

DR. MELINDA K. GERMANN, Quincy, Ill agreed with Dr Lowenburg in his reference to the physician instructing the mother in the home modification of milk, and asked him how fat and proteid indigestion in artificial feeding can be recognized

DR. ROBERT W HASTINGS, Brookline, Mass, said that it is desirable to start with a whey mixture in the feeding of the infant, adding cream as seems best and reaching a certain proportion of whey and cream which shall make the ideal food for that baby This is safe, simple and perfectly practicable Of course not every child will find this the best modification Whether or not the whey and cream agree with the baby may well be decided by the simple methods laid down by Dr Lowenburg

DR C G KERLEY, New York City, agreed with Dr Townsend in giving cereal mixtures at the sixth month, as he can feed babies better when cereals of some kind are added at about that period He happened to be in Elmira at the time of establishing the milk commission and knew something of the difficulties which Dr Brown encountered in establishing a certified milk supply It is good missionary work to start a milk commission in any city It invariably improves the general character of all the milk produced in the locality He is particularly interested in Dr Lowenburg's success with dispensary patients in milk feeding The general idea is that the reverse is true in dispensary service Dr Kerley has had very satisfactory results in working along these lines Physicians should take the trouble to teach patients the principles of milk feeding In feeding very delicate children in families

who can afford the very best laboratory preparations Dr Kerley uses whey With a well conducted laboratory and following out the methods suggested by Dr Lowenburg very few cases will need wet nurses

DR S M HAMILL, Philadelphia, said that his experience with whole milk and fat free milk has been different from that of Dr Townsend Frequently he has been able to feed infants on fat free milk and cream combined when he could not feed them on cream and whole milk mixtures

DR. THOMAS MORGAN ROTCH, Boston, said that almost everyone interested in infant feeding indulges in a new formula As a mathematical production, Dr D R. Brown's formula is exceedingly good, but it is not the way to get simplicity in infant feeding Dr Rotch said first judge what percentage the infant needs and then calculate it in the way one finds best Some physicians may not believe in using the whey mixtures by which the proportions of whey proteid and caseinogen are altered so as to resemble those of human milk, but Dr Rotch believes in this method appropriately used A large number do believe that no matter what is said about simple methods many of them are sufficiently accurate to modify milk satisfactorily The whole root of the matter is to find out what a baby needs and to write the prescription for it. He hopes that in the future there will be laboratories just as there are now apothecary shops, so that physicians can write for the percentages the babies need. To attempt to interfere with physiologic truths and to educate an undeveloped function to perform its work before Nature has intended, he said, is not a true principle Most physicians think that mother's milk is a pretty good food for babies Dr Rotch believes it is the best food for the first year of life, if it is good mother's milk In all these years of direct feeding from breast milk, Nature has not introduced starch into mother's milk at the fourth month, and yet breast milk remains the best food Therefore in substitute feeding, he asked, why call on the function to carry on its duties before Nature has intended it to? He does not claim that the men who use certain cereals ought not to do so It is perfectly right for them to do so, but there are many others who are following rather more closely Nature's methods in not giving cereals in the early months They believe they get along much better without them Yet the experience of one man must not be underrated Dr Kerley's method must be taken fully into consideration Dr Rotch declared that it is better not to force a function before it is ready to be used, not to bring in the use of cereals thinking they are better than mother's milk, that the physician should think in percentages, write in percentages, find out what especial percentages of the fat, sugar, proteid, etc., the baby needs and get them by any method of calculation that is most convenient to his individual type of mind

DR. D R. BROWN, Salem, Mass, said that it is somewhat difficult to demonstrate the mathematical principles on which the calculation of percentage mixtures depends, and at the same time to show the simplicity of the percentage method He is well aware of the intolerance of mathematical formulas, but, to insist that the substitute food shall contain definite percentages of the food elements, and then say that formulas, which express in the simplest possible way the necessary operations, are of interest only to the mathematician, that it makes no difference whether they are accurate and adequate, or not is inconsistent Without accurate computation, there can be no "accurate method" In all the published formulas, certain analyses have been assumed for the cream and milk employed, cream and milk of other than the assumed analysis can not be computed accurately by these formulas The percentage method, therefore, has never been established on a mathematical basis The "working formulas," which Dr Brown did not have time to show, yield, he said, satisfactory results

DR C TOWNSEND, Boston, said he wished to make himself clear on the matter of cereal dilution Generally, he thinks that babies after six months are better for cereals Very often he begins with cereal dilution before that age and sometimes uses it with the new born, notwithstanding the fact that Dr Rotch states that there are no cereals in woman's milk Unfortunately, woman's milk and cow's milk are very different not only in the percentages of their ingredients, but also in the ingredients themselves

DR C W M BROWN, Elmira, N Y, said that he is glad that the idea of the milk commission commends itself to the members of the Section Those who have discussed it, however, are all from the large cities His appeal was to the representatives of the smaller ones From the standpoint of the general practitioner he spoke in regard to the question of infant feeding He became specially interested in it after more than twenty years' practice He listened to the teaching of several men. He read all the articles in the English language on this subject and whenever he came to an article containing mathematical formulas he was puzzled Perhaps, he said, he has what Dr Claiborne calls "figure amblyopia" He is sure that all such things cloud knowledge From the standpoint of the general practitioner a fundamental knowledge of the principles underlying infant feeding is needed, a knowledge of the kind and quality of the food which normal infants at different ages need and are able to digest, and, more than that, a statement of the symptoms, so far as can be gained from a study of the baby and from the character of the stools, whether or not there is fat digestion, proteid digestion, etc Each one must apply this knowledge for himself Everything must be made simple and plain so that mothers as well as physicians can understand it Besides the nursing bottle marked for ounces and half ounces, Dr Brown uses a pint graduate, many times nothing except the graduated nursing bottle, and succeeds fairly well

DR H LOWENBURG, Philadelphia, objected to the chart of Dr C W M. Brown because it is not needed It is just such mathematical curiosities as this, he said, that prevent many practitioners from adopting percentage feeding He believes with Dr Townsend that one of the most important things in securing a successful formula is to secure a clean milk with which to work The less milk is handled on the farm, the sooner cooled and the better iced the better it is for the infant He said that fat indigestion is recognized by vomiting occurring from half an hour to an hour after feeding The vomitus is sour and smells like rancid butter Diarrhea and sometimes constipation occur This latter condition has recently been emphasized by Holt. The fat can be differentiated from the curds by its solubility in ether, its floating on water and by the fact that it is blackened by osmic acid. Proteid indigestion is diagnosed by green stools curds, mucus and usually a foul diarrhea Sometimes the stools are constipated and white Sugar indigestion is rare and is characterized by an acid diarrhea and excoriation of the anal region In adding cream to whey the latter should be heated first, otherwise the cream will be curdled. However if heated above 158 F the lactoalbumin will be coagulated He has used whey mixtures in hospital work more than in private practice He agreed with Dr Brown of Elmira as to the necessity for simplicity in infant feeding

Medicolegal

Waiver of Privilege by Administrator and Others.

Section 4608 of the Iowa Code provides that no physician or surgeon shall be allowed, in giving testimony, to disclose any confidential communication properly intrusted to him in his professional capacity, and necessary and proper to enable him to discharge the functions of his office according to the usual course of practice. Such prohibition shall not apply to cases where the party in whose favor the same is made waives the rights conferred The Supreme Court of Iowa says, in Long vs Garey Investment Company, that, ordinarily, an administrator or executor represents the deceased In most controversies he acts in his stead, as in prosecuting or defending claims for or against the estate, and as a proponent of will The heirs or devisees may also waive the privilege in such a contest But the privilege can not be waived by the appointee as beneficiary under an insurance policy Nor can it be waived by any one not in some way representing the patient or his

interests And the court says that in an action by an administrator to set aside conveyances of land, as bearing on the issue of the decedent's inability to execute the instruments, the administrator so far represents the deceased that he may waive the privilege of the patient by calling the physician to testify concerning communications made to him as such But in so far as the action rests on allegations of fraud, the testimony of the physician should not be considered, for an administrator in such a case does not represent the deceased or his interests

Request and Promise to Pay for Operation Inferable

The Appellate term of the Supreme Court of New York holds, in the case of Pryor vs Milburn, that where there was evidence that a surgeon had performed an operation for pay on a patient at a hospital about three days prior to the operation for which compensation was sought, that the last operation was absolutely necessary "on the chance" to save the life of the patient, and that the patient was operated on as claimed, this evidence warranted an inference of a request on the part of the patient to have the operation performed, with an understanding that a reasonable compensation would be paid for the performance of it

Court Not Sure Woman of 60 May Not Bear Children

The Court of Appeals of Kentucky says, in Bailey's Trustee vs Bailey, where there was a woman 60 years old, whose husband was alive, and, so far as the record showed to the contrary, was a vigorous man, that it is unable to concur in the conclusion that, because the woman had arrived at the age of 60 years it was impossible that she should thereafter bear children It says that it knows of no rule, either in law or nature, for such a conclusion, but, on the contrary, very high authority can be cited against it Gen xvii, 17, Gen xxi, 2

Insane Delusions and Testamentary Capacity

The Supreme Court of Iowa says, in the will case of Hardenburgh vs Hardenburgh, that while it is true that the existence of insane delusions shows a diseased condition of the mind, it is still true that a person thus afflicted may be entirely sane on all other subjects, so that, although one afflicted with insane delusions can not be said to be posessed of an entirely sane mind, it can not be said that he is generally insane or of such mental incapacity as to disqualify him from making a valid will But it is the general rule that insane delusions existing in the mind of a testator will render invalid a will which is the direct offspring of such delusions, although the general capacity of the testator remains unimpaired.

Taking Exercise and Not Seeking Medical Aid—Carrying Sick Person Beyond Destination.

The Supreme Court of Wisconsin says, in the case of Nelson vs Chicago & Northwestern Railway Company, an action brought to recover damages for carrying the plaintiff, when sick, beyond his destination and leaving him at another point, that it was claimed that he was guilty of contributory negligence in attempting at the latter station to walk about and omitting to procure the aid of a physician. But it did not appear that either he or his friends understood the nature of his physical condition, or were apprised that he was suffering from a brain lesion accompanied by cerebral hemorrhage He was not informed that his condition required immediate medical attention He believed that the physical exercise taken by him was conducive to his improvement Under such circumstances his failure to seek medical advice and assistance at that point and his conduct in walking about the place did not in themselves so clearly show negligence on his part that the court could so declare it as a matter of law, and the determination of the question required submission to the jury, on all the evidence in the case which found in his favor Furthermore the facts of the plaintiff's affliction having been brought to the attention of the trainmen, who were informed that he desired to get home for care and treatment and were requested to put him off at his destination, the court says that it seems obvious that, under such circumstances, an ordinarily prudent person would know that a sick person must necessarily be injured to some extent from the excitement incident to the worry disappointment and mental strain, and the additional physical exertion required for the extra travel, his stay among strangers at the hotel, and the delay in receiving proper rest, care and medical attention.

Responsibility of Physician or Surgeon—Bad Results Not Conclusive of Malpractice—Expert Evidence

The Supreme Court of Oklahoma holds, on the appeal of Champion vs Kieth, an action for malpractice brought by the latter party, that a physician or surgeon is never considered as warranting a cure, unless under special contract for that purpose His contract as implied by law is that he possesses that reasonable degree of learning, skill and experience which is ordinarily possessed by others of his profession, that he will use reasonable and ordinary care and diligence in the treatment of the case which he undertakes, and that he will use his best judgment in all cases of doubt as to the proper course of treatment He is not responsible for damages for want of success, unless it is shown to be the result of want of ordinary skill and learning, such as ordinarily possessed by others of his profession, or for want of ordinary care and attention He is not presumed to engage for extraordinary skill or for extraordinary diligence or care, nor can he be made responsible in damages for errors in judgment, or mere mistakes in matters of reasonable doubt or uncertainty This rule of responsibility is treated in many different ways, but the above the court thinks, substantially gives the rule in a succinct form

In this case the plaintiff, while handling a sack of grain in a flouring mill where he was working, turned suddenly, and his hip gave way The defendant was called to attend him There was no attempt to show that he did not possess that reasonable degree of learning, skill and experience which is ordinarily possessed by others of his profession The effort was to show that he did not use reasonable and ordinary care and diligence in the treatment of the case, in other words, that he did not properly diagnose the case, and treated it as one for dislocation, when he should have observed that there was a fracture, and treated it as such But it appeared that at the time he called another physician of experience and standing to aid him in consultation and making an examination of the injury, and the two made a thorough examination, and arrived at the conclusion therefrom that the thigh was dislocated, and thereupon set the same, and placed it in a plaster of Paris cast, and afterward both physicians visited the patient three or four times until he moved away from the city Moreover, it appeared that in making the diagnosis as to the injury sustained and the subsequent treatment thereof every precaution was taken and every method used which other surgeons possessed of a reasonable degree of learning, skill and experience would have used under like circumstances, though the treatment was not successful, and resulted unsatisfactorily The court holds that such evidence did not establish a case of negligence on the part of the attending physician and did not show a failure on his part to use ordinary skill care and attention, and further, that, under such circumstances he was not responsible in damages for want of success

Even admitting that there was a mistake in the diagnosis of the case, still the evidence, in the court's opinion, failed to establish negligence It says that it might be here observed that even if the testimony of the plaintiff showed that there was in fact a fracture, which the court does not think it did to any reasonable degree of certainty, still the examination having been made long after the injury, and at the time when all of the witnesses admitted that a better and more satisfactory examination could be made than at the time of the injury, it would be the subject of some criticism on that ground Again, the court says that it might be noticed that the testimony of expert witnesses, in cases of this kind, is only at best opinionative, there is usually nothing in it very definite or conclusive. Opinionative testimony is never more than merely persuasive.

It did not follow because the treatment resulted unsatisfactorily, that, therefore, the surgeon was negligent The court thinks it is a matter of common knowledge that in very many cases of like injuries, as well as others, under the most skilful treatment, Nature fails to respond properly, and the result is permanent injury It also knows that some persons recover

readily from injuries that are the most serious, in fact, cases that seem at first to be almost if not quite hopeless, while others fail to recover from very slight injuries This is not because of any want of skill or of the negligence of the surgeon, but it is because of the inherent recuperative power in the patient on the one hand and the lack thereof on the other

In the trial of cases such as this one, courts should proceed with great care, as frequently there is liability that prejudice will creep into the minds of the jurors, and ofttimes a jury is liable to arrive at unwarranted conclusions, and from a reading of the entire record it would seem that such was the case here, as the record disclosed that the defendant was a reputable surgeon, possessing the ordinary skill and ability required, that he used the precaution of calling in an assistant with perhaps even more skill and knowledge than he himself possessed, that their examination was very thorough, that all precautions and appliances at their command were used, that the treatment given was proper and skilfully applied, and that the attendance afterward was diligent on the part of both surgeons, the result alone, however, being unsatisfactory To hold the defendant liable in damages under such conditions would amount to a warranty of a cure, and this, too, a case treated on his part as one of charity, without any expectation of a fee or an intent to charge one

Pictures Not Enjoinable

The Supreme Court of Illinois says, on the appeal of Christian Hospital vs People, ex rel Murphy, that certain facsimiles of certificates of membership in the staff of the hospital were ornamented with a picture which apparently represented the lecture room of a medical school where surgery was taught The picture was oval in shape, 1¼ inches high at the widest place and 2¼ inches long There were tables in the front, with some persons standing around Back of the tables there appeared to be an amphitheater filled with people, and there were about 40 people in the picture The largest figure in the foreground, standing by the table, was alleged to be that of the complainant, and the head of that figure was not larger than a hemp seed The faces of the spectators seated in the amphitheater were no larger than pin heads There were affidavits that the largest picture represented the complainant, and that it would be recognized as his picture by his acquaintances It seemed that his features could be distinguished in the picture by persons who knew him, but it was clear that there would be no implication from the picture that he was in any way connected with the hospital The mere publication of this picture would not be an act for which he could obtain an injunction

Dropping of Tooth Into Lung

The Court of Appeal of the Second District of California says that it was alleged in the complaint in the case of McGehee vs Schiffman that the defendant had extracted seven teeth and removed all of the same from the plaintiff's mouth excepting one tooth, which, by the defendant's carelessness, negligence, and unskilfulness, was permitted and allowed by him to drop and pass into the plaintiff's right lung, without any fault or negligence on her part It was contended that this was insufficient in that the negligence averred was not the proximate cause, for the reason that it was manifest that the plaintiff, having control over her own muscles and breathing apparatus, the tooth by any negligence or omission of the defendant could only have been allowed to escape into the mouth, and that it should reach the lung comprehended action on the plaintiff's part which would be the proximate cause of the injury, that, if there was an unbroken sequence of events through which the injury was chargeable to the defendant, those continuous events should have been pleaded, that the complaint was uncertain in that it could not be ascertained how or in what manner any carelessness on the part of the defendant occasioned the injury, nor how the defendant by any act or omission of his could permit or allow the plaintiff's tooth to drop or pass into her right lung The court however, regards the complaint as sufficient and in no sense as ambiguous or uncertain It also thinks that there was evidence in the record sustaining findings that the defendant carelessly and negligently permitted and allowed a tooth to drop and pass into and down the plaintiff's windpipe, and thence into the plaintiff's right lung, without fault on her part, by reason of which she was damaged Among other things this evidence tended to show that an anesthetic was administered, that when the plaintiff regained consciousness she was strangling and coughing as though she were choking, and she felt as if some foreign substance had gone through her windpipe, that she continued this coughing and became sick, that an abscess formed in the lower lobe of the lung and quantities of yellow pus were expectorated, that afterwards during a fit of coughing, a tooth was expelled from the lung, that before she entered the defendant's office to have these teeth extracted she was in perfect health, that thereafter she was continuously under the care of a physician, but began to improve after the tooth was expelled On the other hand, there was no evidence in the record that the defendant took any precaution to discover whether any of the teeth or any fragments thereof had not been removed from the mouth But there was evidence tending to show that, notwithstanding the plaintiff's coughing and giving every evidence of having some foreign substance in her windpipe, no attention was paid to her by the defendant, and no effort made to ascertain the cause of her unusual condition There was, therefore, the court says, competent evidence tending to establish the averments of the complaint, not only as to the negligence, but as to the proximate cause of the injury A judgment for the plaintiff affirmed

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Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Boston Medical and Surgical Journal.

January 31

1 *Trypsin Treatment of Cancer W P Graves Boston
2 Instruction in the Physiology and Hygiene of Sex in Public Schools. H C Putnam Providence R I
3 *Can a Specific Disease Be Aborted? J M. French Milford Mass
4 *Ancient and Modern Ideas Concerning Tuberculous Adenitis H F Stoll Hartford Conn
5 Chloral Delirium H W Mitchell Danvers Mass

1 **Trypsin Treatment of Cancer**—Graves reports four cases of recurrent cancer of the breast in which this treatment was carried out systematically and the results were typical The cases were inoperable, the patients were in good general health Graves began with 10 minims of the undiluted trypsin solution, and after two or three treatments increased this to 40 minims three times each week Severe constitutional reaction was observed only once Graves sums up his experience as follows First, a discrete cancerous node systematically attacked by injections of trypsin shrinks and becomes hard and fibrous or disappears Second, neighboring nodes are little if at all affected, and are probably influenced only when the trypsin comes into actual contact with the growing cells Third, the treatment of a given node causing it to shrink or disappear does not prevent the appearance later of another node in immediate proximity to it Fourth, there is no evidence in these cases to show that trypsin affects cancer cells by circulating in the blood, or that it affects them in any way except by direct contact Fifth, the internal administration of the various ferments of the pancreas is of benefit to cachectic patients, but there is nothing to show that this benefit is due to anything else than the assistance given to the intestinal digestive secretions of the individual patient Sixth, the direct action of trypsin on growing cancer cells as shown clinically and microscopically is sufficient warrant to continue the treatment in inoperable cases especially in view of the fact that there are apparently no serious results that can occur from its use

3 **Abortion of Specific Diseases**—French says that although it is generally conceded that specific diseases can not be aborted, yet the use of antitoxin in diphtheria and the results obtained controvert this belief If this be true, French asks, may it not also apply to pneumonia, typhoid, malaria, syphilis gonorrhea rheumatism and tuberculosis

4 Tuberculous Adenitis.—Stoll believes that an earlier diagnosis of tuberculous lesions and a keener appreciation of what can be accomplished by the fresh air treatment will materially diminish the number of cases in which operative interference is indicated.

New York Medical Journal.

February 2

6 *Common Misconceptions in the Pathologic Physiology of the Circulation and Their Practical Significance. T C Janeway New York.
7 *Surgical Application of Blood Examinations J B Deaver Philadelphia.
8 Age Limitations of Sports H Toeppen St. Louis
9 *Early Diagnosis of Pulmonary Tuberculosis With Special Reference to Symptoms W H Coffmann Asheville N C
10 *Immediate and Remote Consequences of Cranial Injuries Based on Histories which Illustrate the Extradural, Subcortical and Intermeningeal Types of Intracranial Hemorrhage H Cushing Baltimore
11 *Case of Urethrovesical Calculus Weighing 845½ Grains S F Earp Indianapolis Ind.
12 Modified Endoscopic Tube and Endoscopic Lacunar Knives F Blerhoff New York.

6 Pathologic Physiology of Circulation.—Janeway emphasizes the importance of making a complete medical study of the pulse rate and blood pressure in every case of acute infectious disease, claiming that much useful information bearing on treatment may be obtained in this way

7 Surgical Application of Blood Examination.—Deaver finds blood examinations of considerable value but urges that more than one blood count should be made before coming to a conclusion because the leucocytes vary greatly with the pathologic progression of the disease under consideration To avoid error, he believes it essential that the blood counts on the same patient should always be made by the same examiner

9 Early Diagnosis of Pulmonary Tuberculosis.—The symptoms and signs discussed particularly by Coffmann are hemoptysis, cough, fever, shortness of breath, pleural pains, evidences of functional derangement of digestion and the presence of a red or livid line at the margin of the gums He says that a tuberculin test is indicated only when other methods of inquiry and examination have failed He states that the truly early stage case will more often be found accidentally or when the physician is especially alert and extends his inquiries further than is usual in ordinary medical practice The patient's early history is of great importance In 256 cases cough was the first symptom in 114, loss of weight and strength in 50, hemoptysis in 20, pleurisy in 18, easily induced fatigue in 14, various disturbances on the part of the nervous system in 10, disturbances of the digestive organs in 8, symptoms attributable to laryngeal involvement in 4, and night sweats in 3 cases Coffmann says that in the hands of very skilful and practiced observers the Roentgen ray as an aid in diagnosis can at most be one of greater or less degree of confirmation, and the method has no differential import In the early deposits of tubercle in the lungs there is no real consolidation, hence no shading in the fluoroscopic picture can be expected. When the disease has caused alterations to a degree that the fluroscope will indicate them, there are auscultatory signs and percussion changes in evidence

10 Consequences of Cranial Injuries.—The third case in the series reported by Cushing was one of an old penetrating bullet wound of the skull involving the left frontal lobe The patient suffered from attacks of epilepsy with vocal aura The bullet was extracted, the adhesions were separated and the cortex was stimulated by faradization The patient recovered from the operation and although he was much improved subjectively, his epileptic attacks continued

11 Urethrovesical Calculus of Large Size.—In the case reported by Earp about two inches of the lower portion of the calculus occupied the distended urethra The patient was a woman, 47 years old, who had suffered from bladder disturbance for about five years For three years there was retention of urine but it was impossible to pass a catheter on account of the obstruction A physician was not notified of this fact Finally the calculus, weighing 845½ grains was passed spontaneously The stone was three inches long and its greatest diameter was 1⅛ inches

Medical Record, New York.

February 2

13 *The Interlude of Cancer J Beard Edinburgh Scotland
14 *Theory of the Toxic Origin of Pernicious Anemia A W Hollis and N E Ditman New York.
15 *The Electric Psychometer F Peterson New York
16 *Medical Expert Testimony G F Shiels, New York
17 *Varicose Veins of the Lower Extremities and Their Treatment P T O Connor Waterbury Conn

13 Interlude of Cancer.—Beard outlines the course and nature of his scientific work and conclusions since the spring of 1888 He says that the theories of epigenesis, somatic origin of germ cells, and recapitulation in development are fading away into thin air before the mighty powers of evolution with predestination an actual tangible continuity of germ cells from generation to generation, and an antithetic alternation of generations as the only possible mode of animal development Beard believes that without doubt cancer is hereditary He says that this is abundantly borne out by clinical histories which he has in his possession According to his belief, the proper scientific treatment of cancer is the enzyme or pancreatic one The preparations used should be potent extracts, scientifically prepared from the fresh gland direct Beard classifies tumors into three groups Embryomata (benign neoplasms), amprimixomata (malignant neoplasms, combinations of embryomata and trophoblastomata), and trophoblastomata (cancer and sarcoma)

14 Toxic Origin of Pernicious Anemia.—Hollis and Ditman describe various experiments carried on by others in the search for knowledge concerning the toxic origin of pernicious anemia

15 Electric Psychometer.—Peterson gives a recapitulation of Tarchanoff's experiments In his own work he uses a Deprez d'Arsonval mirror galvanometer and a horizontal glass scale placed about one meter from the galvanometer to which the lamp is attached The light shines on the mirror from which it is reflected to the scale Here the light travels to and fro, marking the fluctuations in the organism of the individual experimented on As a rule, the galvanometer is put into circuit with one or two Bunson cells and a rheostat, the patient's hands making contact on copper plates on clasping nickel plated brass electrodes In order to affect the instrument the emotions excited must be actual and real The patient is required to respond to any word uttered with the first word that comes into his consciousness Indifferent words produce no effect on the finger of light in the psychometer, but words exciting emotion send the light along the scale for a varying distance in proportion to the intensity and actuality of the emotion aroused

16 Medical Expert Testimony.—Shiels believes that expert medical evidence could be of the greatest value in upholding justice if it were properly introduced He suggests two plans (1) Let the attorneys of each side select two experts and let the four thus chosen choose a fifth These five men could, after mature deliberation, present a full and useful report on any technical points considered by them Or (2), the matter could be left in the hands of the court, who could call one or a dozen medical men to elucidate without prejudice any technical points that might arise in the trial Shiels favors the plan in which the court has control

17 Treatment of Varicose Veins.—O Connor believes that it is not alone the greater degree of surgical skill and dexterity that determines success in the management of these cases but that a factor of equal importance appears to be the aseptic precautions necessary to be carried out before during and after manipulation

Lancet Clinic, Cincinnati

January 26

18 Present Status of the Roentgen Ray S Lange Cincinnati
19 Was the Emperor Napoleon Sane or Insane During the Last Dozen Years of His Life and If Sane was He Morally Responsible? A N Ellis Maysville Ky
20 Clinical Indications for Cesarean Section W Schell Terre Haute Ind.

February 2

21 Early Recognition of Acute Int [illegible] Surgical Intervention J A [illegible]
22 What to Do In Incipient C [illegible] H Grant Louisville

Illinois Medical Journal, Springfield.

December

23 Future Progress in Surgery D W Graham Chicago
24 *Problems in Appendicitis. H N Rafferty Robinson Ill
25 *Some of the Complications and Emergencies in the Surgical Treatment of Ovarian Cystoma. G L, Eyster Rock Island
26 Nutritional Background of Adolescence F P Norbury Jacksonville.
27 Arthritis Deformans E W Ryerson Chicago
28 Subjective Symptoms of Eye Strain and Their Effect on the Pupils Work A. L. Adams Jacksonville.
29 Modern Conceptions of the Metabolism of the Diabetic. R W Webster, Chicago
30 *Modern Dining Car M Cavana, Oneida N Y
31 Prognosis and Surgical Treatment in Traumatic Ruptures of the Kidney Ureters and Bladder W Fuller Chicago

January

32 Traumatic Ruptures of the Intestines and Stomach Their Prognosis and Treatment. E. W Andrews, Chicago
32½ Treatment of Diffuse Suppurative Peritonitis J A Blake, New York
33 *Duties and Obligations Relating to Tuberculosis C W Lillie East St. Louis
34 Importance of Specialties in Educational Centers J Price Philadelphia.
35 *Case of Leprosy E A Fischbin and E C Seufert Chicago
36 *Leprosy in the United States and the Policy to be Pursued in Regard to It W A. Pusey Chicago
37 Lumbar Lordosis M S Marcy, Peoria.
38 Treatment of Inoperable Malignant Tumors—Carcinoma J M G Carter Waukegan
39 *Multiple Sclerosis With Report of a Case. J Grinker Chicago

24 and 25—See abstracts in THE JOURNAL June 23 1906 page 1965

30 **Modern Dining Car**—Cavana calls attention to the danger of toxicosis from eating undrawn poultry and cites a number of instances in which the patrons of dining cars were poisoned in this way He says that the time for the consideration of present cold storage methods and their health and life destroying results is at hand The protection of the railway dining car and the safety of its patrons and the general public, is the prize at stake The profession ought to put forth its best efforts to procure such legislation in the several states as will compel, by law, as thorough and *complete dressing, cleaning, and preparation of game and* poultry for storage and the market, as is now practiced by the slaughterers of beef, pork and mutton, and thus safeguard the masses from the dangers of health and life, which must follow continued indifference toward this situation

33—See abstract in THE JOURNAL, June 9, 1906, page 1786

35 and 36—See abstracts in THE JOURNAL Dec 8, 1906 page 1945

39 **Multiple Sclerosis.**—Intention, tremor, scanning speech nystagmoid movements, exaggerated reflexes Babinski sign transient motor and sensory palsies, attacks of vertigo, insignificant objective sensory disturbances, slight and transient sphincter trouble remission and intermission of symptoms, absent abdominal and cremasteric reflexes—are symptoms that make Grinker's case one of the typical Charcot type of multiple sclerosis, and besides, satisfy the demands of modern authors Grinker says that the question of trauma as a cause in this case can be disposed of by recalling that the first symptom—an external rectus paralysis—occurred one year prior to the fall If any influence is to be attributed to the trauma at all it can only be that of hastening the latent processes and not of actually causing them Grinker claims that strychnin, iodids, arsenic, iron and other so-called tonics do not seem to act beneficially The best single drug for palliative treatment he has found to be sodium bromid, in doses of from 15 to 20 grains three times daily It has a tendency to relieve the extreme nervousness and often gives the patient a feeling of greater security in walking

Detroit Medical Journal.

January

40 The Physician as a Character in Fiction C B Burr Flint
41 *Nitrous Oxide Gas W Warren, Detroit.
42 *Chloroform and Ether C S Oakman Detroit.
43 Study of Infant's Stool F Selter Solingen Germany

41 **Nitrous Oxid Gas.**—Warren's experience with nitrous oxid anesthesia has been entirely confined to its use for operations on the tonsils and the removal of adenoid vegetations from sixty six patients The youngest of these was about three years and six months old, and a few of them have been above twenty five years of age In some of the small patients with limited pulmonary capacity the anesthesia has been very brief apparently not over thirty five seconds in duration In patients over 10 years of age, however the anesthesia generally lasts from forty five to fifty seconds, and usually affords ample time for the removal of both tonsils and adenoid growths Warren has never noted any ill effects from inspiration of blood or tissue

42 **Chloroform and Ether**—Oakman says that the margin of safety is narrow with chloroform and wide with ether Chloroform is a powerful drug and dangerous Ether, while *comparatively innocuous, is yet not an agent* to be trifled with and there should be a united effort to promote greater skill in its administration

Washington Medical Annals, Washington, D C

January

44 Combat of Scientific Medicine With Superstition J D Morgan Washington D C
45 First Fifty Cases of Tuberculosis Treated at Starmont Sanatorium. Surgeon General G M Sternberg U S Army
46 Simple Retinitis R. S Lamb, Washington D C
47 Postoperative Complications Connected With Kidney and Ureter G B Miller Washington D C.
48 Typhoid Fever Perforation Operation Recovery C S White Washington D C
49 *Partial Review of Internal Medicine.* C. N Howard Washington D C.
50 *Case of Friedreich's Disease. W L. Robins, Washington D C
51 Two Cases of Cerebrospinal Meningitis E E Richardson Washington D C
52 Hypernephroma of Kidney Nephrectomy I S Stone Washington D C
53 Case of Aortic Regurgitation and Floating Liver E. P Magruder Washington D C
54 Case of Hodgkin's Disease or Tuberculosis. T A Groover Washington D C

50 *Friedreich's Disease*—Robins reports one case and analyzes two recorded cases Of the 100 cases studied 67 per cent began at or below the age of 12 In 80 of these 100 cases more than one case of this disease was found in the same family In only 6 cases was there direct hereditary transmission The mental condition was probably normal in all but 7 cases Of the 13 cases in which the expression of countenance was mentioned practically all the patients presented a dull torpid appearance Two cases were reported to follow an injury to the head In 2 cases there was probably a history of syphilis There was a marked alcoholic history in one or other parent in 14 cases and in a grandparent in 4 cases In 2 cases the father had phthisis, and in one case the mother was phthisical In 8 cases the parents were cousins Ten cases followed closely on measles or scarlet fever or both Five other cases followed such diseases as remittent fever, whooping cough dysentery and rheumatism A history of insanity was found in 3 cases In one case the father suffered from migraine, and in one case the mother had chorea The mother of 3 patients died of cancer of the liver Choreiform or jerky movements of the head and trunk were marked in 51 cases Of the 25 cases in which special mention of unsteadiness was made probably 18 patients showed inability to maintain the erect position with the eyes closed, and many of the latter number were unable to stand unsupported with the eyes open The Romberg symptom was recorded as present in only 3 instances The knee jerks were absent in 71 and diminished in 5 cases They were recorded as exaggerated in only 6 cases All deep reflexes were recorded as absent in 3 instances In a large majority of the cases no mention was made of any of the deep reflexes other than the patellar tendon The Babinski sign was present in 3 cases

Concerning the superficial reflexes, which are not especially important in this disease the plantar, cremasteric and abdominal were present in 23 cases In a few instances the superficial reflexes were absent The plantar reflex was exaggerated in 5 cases Of the 55 cases in which the condition of the feet was given, 47 showed more or less characteristic deformity The condition of the spine was spoken of in 64 cases Of this number 48 showed lateral curvature, *the location of which in a large majority of cases*, was in the dorsal region Antero posterior curvature was present in four cases In 12 instances speech was not affected Of the 70 cases in which there was affection of speech, perhaps the difficulty would best be described by the words "slow," "drawling," "slurring" "indistinct" and "jerky" or "ataxic." In only two cases was the speech considered to be of the

"scanning" type There was specific mention of some loss of motor power in the legs in only 20 cases In most of these cases there was no atrophy whatever In 78 cases ataxic symptoms began first in the lower extremities, and in only 6 cases did they begin in the upper extremities Several cases were doubtful

Of the 51 cases in which mention was made of the sphincters, 42 showed the bladder and rectal sphincters to be normal There was a slight incontinence of urine in four cases, and micturition was delayed in 5 cases In 23 cases the gait was described as "staggering or drunken," in 19 as "ataxic," in 11 as "unsteady, awkward or jerky" In a few cases the gait is called "shuffling or reeling" The field of vision was practically normal in all cases cited. Nystagmus was reported as present in 51 cases and absent in 20 Lateral nystagmus was specifically mentioned in 29 cases Sensation was practically normal in 41 cases, in many cases no mention was made of it Muscular sensibility was diminished in 6 cases There was diminution of heat, pain and touch in only 4 cases Pains or cramps in the legs were present in 6 cases, lightning pains in 2, dull backache in 2, and girdle sensation in only one case Vertigo was decided in 2 cases, faintness and giddiness in 4 cases In 2 cases there was syncope

Archives of Pediatrics, New York.

January

55 *Relapses in Typhoid Fever of Children H Koplik and H Heiman, New York.
56 Teaching of Scientific Infant Feeding H D Chapin New York
57 *A New Siphon Aspirator F Huber New York
58 Paralysis of Abducent Nerve Following Influenza A S Wilner New York.
59 Case of Septic Endocarditis with Recovery W C Gardner New York
60 Treatment of Scarlet Fever I L Polozker Detroit

55 Relapses in Typhoid.—Koplik and Heinman analyze 24 relapses which occurred in 160 cases of typhoid and concluded that relapses in typhoid fever are more common in children than in adults The mortality is exceedingly low The usual duration of a relapse in a child is from one to two weeks As a rule the temperature is continuously high between a rapid rise at the onset and a rapid fall to normal at the termination of the relapse A constant symptom in addition to the prolonged temperature elevation is about 75 per cent leukopenia in about 60 per cent of relapses in children Complications in these cases are mild and infrequent For the prediction of a relapse no reliable signs are furnished by the character of the interpyrexial period nor by the course, duration and severity of the original attack Persistent enlargement of the spleen after defervescence occurs in a fair proportion of relapse cases, and a relapse following a mild primary illness is not as likely to be repeated as one occurring after a severe original attack

57 New Siphon Aspirator—The appliances described by Huber for use in pleural effusions are said to be simple, convenient and inexpensive For more than 20 years it has been the practice of Huber to use the Dieulafoy as a means of siphoning the fluid from the pleural cavity in the following way After the needle has been inserted, two or three ounces are slowly drawn off in the usual manner and allowed to remain in the glass barrel The outflow cock is now opened a steady flow is established at once, the *vis a tergo* being supplied by the expanding lung The apparatus, it is understood must be on a lower plane than the chest The serous or seropurulent fluid escapes without the necessity of any further manipulation An ordinary aspirating or exploring syringe about 3¼ inches in length, holding about one half ounce (the lower fitting replaced by a cap provided with two stopcocks), is employed as a substitute in place of the elaborate glass cylinder with the rack and pinion action of the Dieulafoy apparatus

Journal of Nervous and Mental Disease, New York.

December

61 Relation of School Work to the Mental Fatigue of Children B Sachs, New York
62 A Definite Clinical Variety of Cerebral Arteriosclerosis J Collins New York
63 Vision Fields in Cases of Indirect or Incomplete Lesions of the Optic System C K Russel Montreal
64 Connective Tissue Character of the Septa of the Spinal Cord as Studied by a New Stain A R Allen Philadelphia

January

65 *Pseudo-Hypertrophic Muscular Atrophy C E. Ingbert Independence Ia.
66 Myopathy of Distal Type and Its Relation to Neural Form of Muscular Atrophy W G Spiller Philadelphia.
67 Consciousness in Brutes. G V N Dearborn Boston
68 Peripheral Obliterating Arteritis as Cause of Triplegia Following Hemiplegia. C W Burr and C D Camp Philadelphia

65 Muscular Atrophy—The histopathologic findings in a case reported by Ingbert add support to the conclusions of other investigators that pseudo hypertrophic muscular atrophy is primarily a disease of the muscles, and that the changes in the spinal cord and in the spinal nerve roots are secondary

Virginia Medical Semi-Monthly, Richmond.

January 11

69 Medical Reminiscences of Richmond During the Past Forty Years. J N Upshur Richmond
70 Prison Sanitation C V Carrington Richmond
71 Calculous Cholecystitis Simulating Appendicitis G G Holladay Portsmouth
72 Hysteria D P Hickling Washington D C.
73 Typhoid Fever General Considerations. B H Hite Hollydale
74 *Mosquito Theory of Malarial Diseases—Is It True? T J Taylor Cochran
75 Plea for Castration to Prevent Criminal Assault T Powell Ruckersville
76 Contusions of Abdominal Wall C W Roller Staunton

74 Mosquito Theory of Malaria—Taylor questions the etiologic relationship believed to exist between the mosquito and malaria He says that if it is true, as claimed by scientists that malaria can not exist unless the particular variety of mosquito is there to propagate it, it is one of the most remarkable facts in the whole domain of natural history He can not understand why this one variety of gnat, with exactly the same internal organs, the same food, habits and habitat as other gnats, should alone be able to develop the malarial parasite He says further, that there are numerous and incontestable facts which do not coincide with the present theory of the origin and propagation of malaria There are regions of the earth, high and dry, which afford no breeding places for mosquitoes yet some of these regions, he states, are intensely malarial

Colorado Medicine, Denver

January

77 Mind Cure Its Service to the Community R C Cabot Boston
78 Early Diagnosis and Treatment of Tabes Dorsalis. G E. Neuhaus Denver
79 *Wright's Latest Opsonic and Bacterial Vaccine Work G B Webb Colorado Springs

79 Opsonins and Bacterial Vaccines—Webb presents what is known of the opsonic theory as promulgated by Wright and reviews several very interesting cases that have been published by Wright He also points out the value of the opsonic index in reference to the effect of exercise in tuberculous patients

American Journal of Obstetrics, New York.

January

80 *Nature of Shock F Boise Grand Rapids Mich
81 A Surgeon's Criticism of Gynecology C W Barrett Chicago
82 *Technic of Fixation of Floating Kidney With Reference to Longyear's Ligament C A L Reed Cincinnati
83 Anterior Vaginal Cellotomy Its Technic Indications and Limitations S W Bandler New York
84 *Preservation of Vault in Vagina in Pelvic Operations A Vander Veer New York.
85 *Observations and Experiences Respecting Symptoms and Treatment of Atresia Vaginæ A J Clarke Cambridge Mass
86 Abortions J A Hall Cincinnati
87 Perineal Tears J J Cannaday Hansford W Va
88 Difficulty Encountered with Fetal Arms in Breech Labor I Reder St Louis

80 Nature of Shock—Boise believes that the circulatory conditions of shock are essentially and primarily a condition of tonic or spasmodic contraction of the heart with probable coexistent contraction of the arterioles Boise reports his experiments on animals in full

82—See abstract in THE JOURNAL Sept 29, 1906, page 1045

84 and 85—See abstracts in THE JOURNAL Oct 13 1906 page 1220

Albany Medical Annals

January

89 Production of Cytotoxic Sera by the Injection of Nucleoproteids R M Pearce and H C Jackson Albany
90 *Chemistry of Atheroma and Calcification (Aorta) I K Pardauf Albany
91 *Action of Certain Drugs on the Elimination of Uric Acid During a Nitrogen-Free Diet H C Jackson and K. D Blackfan Albany

92 *Experimental Myocarditis Study of Histologic Changes Following Intravenous Injections of Adrenalin R M. Pearce, Albany
93 *Production of Vascular Lesions in the Rabbit by Single Injections of Adrenalin R M Pearce and L K. Baldauf Albany
94 *Experimental Production of Liver Necrosis by Injection of Hemagglutinative Sera. R. M. Pearce, Albany
95 *Regenerative Changes in the Liver R. M. Pearce, Albany
96 *Liver Necrosis and Venous Thrombosis in Horses Actively Immunized with Diphtheria and Tetanus Toxins and with Streptococci and Their Products H. D Pease and R. M Pearce Albany
97 *Affections of the Thyroid Gland G E Beilby, Albany
98 *Puerperal Infection E McDonald Albany
99 Embryonic Glandular Tumors of the Kidney H W Carey Albany
100 *Tuberculosis of an Adenomyoma of the Uterus J L. Arcbambault Albany
101 *Four Instances in which Giant Cells Occurred in Unusual Situations N K Fromm Albany
102 Spontaneous Amputation of an Appendix Contained in a Femoral Hernia Sac F G Schaible Albany
103 Case of Exfoliative Cystitis J F Robinson Albany
104 *Malaria with General Distribution of the Plasmodia. A. T Laird Albany

89—See abstract in THE JOURNAL, Nov 24, 1906, page 1766

90—See abstract in THE JOURNAL, Dec. 1, 1906, page 1854

91 *Action of Drugs on the Elimination of Uric Acid.*—Jackson and Blackfan have performed a very extended series of experiments for the purpose of determining the action of alcohol, colchicum and sodium salicylate, on elimination of uric acid during a nitrogen free diet After personal experience, they decided that for their taste the daily diet most adapted to prolong general use was the following

Grams.	Calorific value
250 arrowroot	957 0
140 pure cane sugar	504 4
50 butter	450 0
100 fat in the form of 250 c c of 40 per cent. cream	900 0
Sodium chlorid to taste	2 811 4

This mixture formed a pudding which was flavored with various kinds of extracts and fruits From the thermodynamic standpoint the diet was found to be sufficient The authors sum up the results of these investigations as follows

1 The elimination of uric acid on a purin free or nitrogen free diet is not a constant value for the same individual
2 There appears to be evidence that the elimination of creatinin may be altered by conditions other than that of the creatinin in the food.
3 Alcohol increases the output of uric acid during a nitrogen diet, there occurs a coincident diminution in the elimination of manin the organic phosphorus pentoxid excretion is also increased
4 Both colchicum and sodium salicylate increase the output of uric acid along with which takes place an augmented excretion of organic phosphorus pentoxid
5 These facts seem to indicate that the rise in the uric acid elimination is caused by an increased formation as a result of augmented decomposition of nuclein-containing compounds of the cell
6 From this it seems reasonable to decide that any agent which tends to cause an increased production of uric acid in the organism and thereby to increase its amount in the blood, must be contraindicated in those conditions where there exists a tendency for a deposition of urates to occur (gout) Probably the temporary beneficial effects of salicylates and colchicum observed clinically are the results of some secondary action possessed by them That no permanent benefit results must be due to the fact that they are contraindicated

92 and 93—See abstracts in THE JOURNAL, Dec 1, 1906, page 1854

94 and 96—See abstract in THE JOURNAL, Oct 13, 1906, page 1227

95—This article also appeared in the *Journal of Medical Research*, Boston, July, 1906

97—See abstract in THE JOURNAL, June 23, 1906, page 1972

98—See abstract in THE JOURNAL, March 3, 1906, page 681

100—This article appeared in full in THE JOURNAL, Sept 8, 1906, page 768

101 Giant Cells in Unusual Situations—Fromm found giant cells in the bronchi in bronchiectasis, in a carcinoma of the tongue, in a recurrent granulation polyp of the aural canal, and in the wall of a cyst of the broad ligament.

104 Malaria with General Distribution of Plasmodia.—In the case reported by Laird, the parasites were found in practically every organ, the spleen, liver, bone marrow, lungs, heart, kidney, pancreas, brain and blood vessels of the intestines The pigmentation of the spleen, liver and brain was very marked

Annals of Ophthalmology, St. Louis.

October 1906

105 Late Changes in Specific Chorioretinitis. J Hirschberg and O Fehr Berlin
106 Choroidal Diseases Their Relation to General Diseases G E de Schweinitz, Philadelphia.
107 Therapeutic Application of Roentgen Ray in Diseases of the Eye W S Newcomet, Philadelphia
108 Surgical Treatment of Trachoma G S Ryerson, Toronto
109 Double External Rectus Paralysis Traumatic in Origin. H F Hansell, Philadelphia
110 Embolism of Cilo-Retinal Artery Loss of One Eye Through Gonorrheal Conjunctivitis, Endocarditis Sequelæ of Gonorrheal Urethritis W Zentmayer Philadelphia.
111 Operative, Postoperative and Traumatic Infections of the Eye H. F Hansell, Philadelphia
112 Enucleation of Eyeball Under Local Anesthesia H D Bruns and E A. Robins New Orleans
113 Report on the Eyes of Four Classes of College Freshmen at University of Pennsylvania M W Zimmerman, Philadelphia.

Medical Library and Historical Journal, Brooklyn

September 1906

114 The Hôtel Dieu of Paris—an Historical Sketch E N La Motte, Baltimore
115 A Sketch of Benjamin Rush H G Webster Brooklyn
116 *A Forgotten Medical Worthy Dr Diego Alvarez Chanca, of Seville Spain A. M. F de Ybarra, New York
117 Supposed Warfare Between Medical Science and Theology J J Walsh New York
118 German American Influence in Medicine and Surgery J C Hemmeter Baltimore.
119 Biography of François Magendie. P M Dawson Baltimore

116—This article appeared in full in THE JOURNAL, Sept 29, 1906, page 1013

The Physician and Surgeon, Detroit

December 1906

120 Some Cardiac Arhythmias L C Grosh Toledo Ohio
121 Opsonins E B Bradley, New York City
122 Primary Basal Celled Carcinoma of the Appendix A S Warthin Ann Arbor Mich

FOREIGN

Titles marked with an asterisk (*) are abstracted below Clinical lectures single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

January 19

1 Fractures of the Base of the Skull A Bowlby
2 *Intraperitoneal Implantation of Ureters into Colon G Barling
3 *Transplantation of Ureter into the Bladder for Ureterovaginal Fistula B P Paton
4 Traumatic Rectovesical Fistula H T Marsell
5 *Microscopic Diagnosis of Tumors During Operations C B Lockwood
6 Etiology and Prophylaxis of Dracontiasis. R. T Leiper
7 Atoxyl in Treatment of Trypanosomiasis A Breinl and J L. Todd.
8 *Treatment of Paralytic Talipes Valgus by Tendon Transplantation B Kilvington
9 Papain in Malignant Growths. C W Branch
10 Hydatid Cyst of Neck with Cellulitis Caused by Rupture and Escape of Hydatid Fluid E C Bevers

2 Implantation of Ureters Into Colon—Barling reports the case of a young man, aged 20, who was suffering from fractured pelvis with ruptured urethra and laceration of the neck of the bladder Exit for the urine was given by suprapubic drainage A suppurating sinus led down to the back of the fractured pubic bone The method of operation pursued in this case was as follows

The ureter was found with little difficulty and was lifted out of its bed for about an inch and a half was divided low down the lower end ligatured and pushed under the peritoneum while the upper end was held lightly between finger and thumb to prevent leaking The portion of bowel to be used was selected and a puncture barely one-third of an inch long made on its inner side, the utmost care being observed to prevent any fecal soiling The upper end of the ureter was threaded with a fine catgut suture, the needle attached to which was passed into the opening in the colon across the bowel and through its opposite wall By means of this suture the ureter was drawn inside the bowel and held in position while a first row of interrupted sutures fixed the outer coats of the ureter to the margins of the incision in the intestine and narrowed this opening up to the walls of the ureter but without constriction A second row of sutures approximated the peritoneal covering of the bowel to the outer coat of the ureter and so secured rapid adhesion and seclusion The suture through the wall of the colon to retain the ureter, while suturing fixed it, was then cut short and its point of exit secured by a single mattress suture The colon was displaced somewhat toward the middle line which relieved the ureter from tension and tended to return it to the bed of subperitoneal fat from which it had been disturbed, while finally the inner edge of the divided posterior peritoneum was sutured to the inner margin of the colon thus giving further security against leaking The wound was closed except for a small gauze drain

The operation on the right side was rather more difficult than that on the left, as the small intestine was not so easily

pushed out of the way and the common iliac vein obtruded a good deal into the wound when the posterior peritoneum was divided

3 Transplantation of Ureter Into Bladder.—In the case reported by Paton the operation devised by Hammerschlag in a case of uretero cervical fistula, was employed successfully

5 Immediate Microscopic Diagnosis of Tumors During Operation.—Lockwood states emphatically that freezing microtome should form an essential part of the equipment of an operating theater He describes the procedure carried out in his service and cites a number of instances to substantiate his claim

8 Treatment of Paralytic Talipes Valgus.—Three cases are reported by Kilvington to show that moderate degrees of this deformity are very suitable for treatment by tendon transplantation He applies a tourniquet above the knee to prevent hemorrhage, and when possible, the transplanted tendons are fixed directly to the bone by silk sutures He says that the decision as to the operation to be performed depends on the muscles affected, but that talipes valgus does not offer the same field for nerve surgery as do paralyses, involving the peronei or extensor muscles

The Lancet, London.

January 19

11 Diagnosis of Tumors of the Spinal Cord F E Batten
12 Skepticism in Therapeutics A. H Bampton
13 *Opsonins and Treatment by Bacterial Vaccines J L. Bunch.
14 *Hemorrhagic Cyst of Spleen W L. Harnett.
15 *Relative Sizes of Maternal Pelvis and of Fetus in Europeans Eurasians East Indians and Bengalis J C H Leicester
16 Fatal Case of Myxedema with Changes in Parathyroid Glands D Forsyth
17 *Pyloric Stenosis and Condition of Pylorus During Life C W Moullin
18 *Abnormal Development of Esophagus J D Spicer
19 *Fat Necrosis J E H Sawyer
20 *Disseminated Sclerosis.* Z Mennell
21 Diphtheritic Membrane Involving Pharynx Esophagus and *Respiratory Passages* F E Field
22 Limitations of Medical Evidence. S B Atkinson.

13 Opsonins and Bacterial Vaccines.—Bunch reviews this subject generally and reports several instances in which these procedures were employed with great benefit

14 Hemorrhagic Cyst of Spleen.—Harnett's patient gave a clear history of malaria On admission a pulsating swelling having all the characters of an aneurism of the popliteal artery was present on the inner side of the left thigh just above the knee The body was covered with a pustular rash and there was well marked general arteriosclerosis The liver and spleen were enlarged Excision of the aneurism was followed by suppuration and death The spleen was found converted into an enormous unilocular cyst which contained nearly a pint of dark brown, turbid fluid which proved to be altered blood Harnett believes that his case supports the view that these cysts arise from rupture of an intrasplenic vessel following, perhaps, the development of an aneurism

15 Size of Maternal Pelvis and Fetus.—Leicester measured 941 pelves and weighed and measured 699 full term children, the patients being Bengalis, Europeans, East Indians and Eurasians As the result of this study he concludes that the proportion in weight and size of the child's head to the size of the pelvis through which it is born is by no means so strikingly regular as would appear from the measurements obtained by Lane, and certainly does not in any way seem to justify the enunciation of any law on the subject

17 Pyloric Stenosis.—Moullin says that patients, unless warned, are likely to expect too much from gastroenterostomy done for pyloric stenosis They should be told that while the gastroenterostomy will relieve the stenosis it does not in any way affect the condition which preceded the stenosis and which may continue after the stenosis has been divided If the conditions of living which gave rise to the dyspepsia at first, when the stomach was healthy, are allowed to continue, they will give rise to the same results, after gastroenterostomy has been performed When patients complain that their condition was not greatly improved by the operation, Moullin puts them to bed, physics them, and restricts them to a milk diet for a few days He has never known a case in which the pain did not disappear immediately and recovery follow at once

18 Abnormal Development of the Esophagus.—Spicer reports three cases of abnormal development of the esophagus due to mal development of the tracheo esophageal septum in the anterior part of the primitive esophagus As a result, the upper part of the esophagus is found to end in a dilated cul de sac, while the lower opens above into the posterior wall of the trachea immediately above the bifurcation The patients died twenty two hours, six and nine days after birth, respectively

19 *Fat Necrosis.*—Sawyer reports 8 cases, three of which have been published before Three of them were associated with acute hemorrhagic pancreatitis, 2 with subacute pancreatitis, and one each with gangrenous pancreatitis, hydrochloric acid poisoning and mitral disease, respectively Sawyer says that although some destruction of the pancreatic tissue seems to be a necessary factor in the production of fat necrosis, yet in cases of extensive disease of the pancreas, fat necrosis does not always occur Three points in his cases seem to oppose Eppinger's view (1) The areas of fat necrosis are sometimes seen just under the peritoneum and nowhere else, except in the immediate neighborhood of the pancreas, indicating that the ferment had escaped into the general peritoneal cavity, (2) the fat necrosis was observed in the edges of a laparotomy wound, and (3) the radiating appearance of the fat necrosis in one of the cases seems to point to direct extension from the pancreas

Journal of Obstetrics and Gynecology of British Empire, London.

January

23 *Tuberculosis of the Female Pelvic Organs. R H Lucy
24 *Tuberculosis of the Cervix Uteri E. E Young
25 *Treatment of Puerperal Sepsis by Active Disinfection of Uterus A. K. Gordon
26 Development of Uterus Bicornis C. Lockyer
27 Three Cases of Chronic Tuberculosis of the Fallopian Tube A W W Lea.
28 Case of Repeated Extrauterine Pregnancy with Estimate of Age of Fetus from Appearances Shown in Roentgen Ray Photograph J Phillips.
29 *Removal of Pregnant Uterus on Account of Fibroids Complicated by Fibroid of Round Ligament* John Campbell

23 Tuberculosis of Female Pelvic Organs.—Lucy draws attention to certain causes of ill health in the female which until recently had been but imperfectly understood, that is, tuberculosis affecting the different structures in the female pelvis, but chiefly tuberculosis commencing in the Fallopian tubes The subject is discussed from a clinical standpoint, the author taking up the channels of infection, tuberculous salpingitis, tuberculous pelvic peritonitis, and tuberculosis of the bladder and of the uterus

24 Primary Tuberculosis of Cervix.—Young reports the case of a married woman, aged 26, on whom a vaginal hysterectomy was done for primary deposit of tubercle in the cervix uteri The only symptoms complained of were the presence of a thick yellow, inoffensive discharge from the vagina, and a constant aching pain in the lower part of the abdomen and sacral region The patient had always been healthy, her husband was healthy, and no family history of tuberculosis could be obtained.

25 Treatment of Puerperal Sepsis.—Gordon describes a series of cases of puerperal sepsis in which he employed somewhat vigorous disinfection of the uterus, after thorough curettage, with most excellent results

Intercolonial Medical Journal of Australia, Melbourne

November 20

30 The Opsonic Index as a Guide for Therapeutic Inoculation with Some Results of Treatment by Vaccines T P Dunhill.
31 Treatment of Bacterial Disease J Smith.
32 Early Signs of Tuberculous Meningitis W H Summons
33 Lumbar Puncture in Children S W Ferguson
34 Fracture of Larynx and of External Auditory Meatus T K. Hamilton
35 Treatment of Extreme Infantile Paralysis of Lower Limb in Children W Mackenzie

Annales de l'Institut Pasteur, Paris

Last indexed page 84

36 (XX No 11 Pp 881 975) *Sterilization with Formaldehyd at High Temperatures (Transformation reversible du trioxymethylène en méthanal) L. Perdrix
37 Reversible Actions of Diastases (Formation et dedoublement des ethers sels sous l'influence des diastases du pancreas) H Pottevin

38 *Spirillosis of Fowl Embryos Compared with Inherited Syphilis in Man (Spirillose des embryons de poulet dans ses rapports avec la Tréponémose héréditaire de l homme) C Levaditi.
39 *Influence of Normal Serum on the Phagocytic Process (Observations sur la phagocytose *in vitro*) M Löhlein
40 Albuminoids in Cheese (Dosage de la matière albuminoide non transformée dans les fromages.) Trillat and Sauton
41 Gangrenous Bovine Affection in Paraguay (Maladie sphacelaire des bovidés du Paraguay) Elmassian and R. Urizar
42 (No 12 Pp 977 1070) Action of Bulgarian Ferment on Milk (Action du ferment bulgaire sur de lait Yoghourt.) G Bertrand and G Weisweiller
43 *Process for Dosage of Albuminoids of Milk. (Matière alb du lait. Nouveau procédé de dosage.) Trillat and Sauton
44 Growth in Curves of Bacterium. (Des tropismes du "Bacterium zopfii Kurth) E Sergent.
45 Dosage of Active Substances in Hemolytic Sera. (Etude des sérums hémolytiques.) L. Remy

36 Advantages of Heat in Formaldehyd Disinfection.—Perdrix reports tests which prove that the amount of gas generated when formaldehyd is heated to 100 C (212 F) is 27 times greater than at 18 C (64 4 F), and at other temperatures in proportion In disinfecting apartments, therefore, the process is immeasurably promoted by heating the rooms by every possible means He states that it is an illusion to suppose that more than a certain proportion of the gas can be injected into a room at a given temperature This proportion, however, can be increased at will by raising the temperature of the room The white powder deposited occasionally on solid objects during formaldehyd disinfection at ordinary temperatures is a product of the polymerization of the gas and is known as trioxymethylene By heating this substance it is possible to transform it back into formaldehyd gas, and this reversible transformation of trioxymethylene can be utilized in practical disinfection Perdrix has devised an apparatus for the purpose with which remarkably effectual disinfection is realized from the transformation of trioxymethylene into formaldehyd gas by the action of heat alone It consists of a copper cylinder with double walls, the space between the walls being filled with boiling water The double front wall is pierced by large horizontal tubes opening into the inner cavity of the cylinder In each of these tubes slides another tube the bottom of which is perforated and the top cut out to form an open drawer These drawers slide in and out and hold the objects to be disinfected The lower drawer holds the trioxymethylene from which the gas is generated by the action of heat Each of the drawers when pushed in projects into the inner cavity, and the articles in them are thus bathed in the gas which enters through the perforations in the bottom No odor of formaldehyd gas escapes from the apparatus It can be working in a room for days with no odor to suggest its presence The few grams of trioxymethylene placed at first in the apparatus have never had to be replaced during all his tests

38 Spirillosis of Fowls Compared with Inherited Syphilis in Man.—Levaditi confirms his previous announcements that inherited syphilis is an acute or comparatively chronic spirillosis of the newborn infants of syphilitic parents, due to the presence of the *Treponema pallidum*, Schaudinn's spirochete. This treponemosis differs in certain respects from the other forms of spirillosis yet known in man and animals, but, on the other hand, the analogies between them are numerous He injected hen's eggs with spirilla and found that they never developed unless the egg had been previously fertilized. The resulting infection produced conditions in the embyro remarkably similar to those observed in the congenitally syphilitic infant Among other facts noted is the finding that Brazilian spirillosis is never transmitted by infected hens to their embryos, but the latter seem to be immunized against infection from the *Spirillum gallinarum*

39 Phagocytosis in the Test Tube.—Löhlein reports tests of the influence of normal serum on the phagocytic process which confirms he says, the assertions of Hektoen and Ruediger He protests against the term "opsonins," as the substances thus styled are the same as those previously described by Metchnikoff under the name of "fixateurs" To avoid all confusion however, he proposes to add to the term fixateur or sensibilisatrice the adjectives "phagocytic" or "bacteriolytic" to distinguish between the two kinds of sensitizing substances in normal and specific sera

43 Dosage of Albuminoids of Milk.—Trillat and Sauton utilize the property possessed by formaldehyd of rendering albuminoids insoluble as a means of determining the proportion of albuminoids present in milk Five c c. of milk are diluted with 25 c c of distilled water and boiled for five minutes and then five drops of formol are added, and the whole is boiled again for two or three minutes. It is then set aside for five minutes and then treated with 5 c.c. of 1 per cent acetic acid and stirred The precipitate is filtered out and the filter and its contents are treated with acetone to remove the fat, then dried, and the precipitate is weighed The addition of the ordinary preservatives to the milk does not affect the precision of the test, which is simple and deserves wide application, they think, for practical dosage of the albuminoids in milk

Berliner klinische Wochenschrift.

46 (XLIII No 52 Pp 1643-1666) *Development of Our Knowledge of Ozena. (Entwickelung der Lehre von der Ozaena) B Fraenkel
47 Medicolegal Value of Deviation of the Complement in Blood Tests (Der Wert des Neisser Sachs schen Verfahrens der Komplementablenkung) A. Schütze.
48 *Measurement of Blood Pressure. (Blutdruckmessung bei Menschen) H. J Bing
49 *Pseudo-spirochetes. (Zur Frage der Silberspirochæte) W Schulze.
50 Non Use of the Voice in Treatment of Laryngeal Tuberculosis (Schweigetherapie bei der Kehlkopftub) Lubinski
51 The Extra Systole Its Pathology Diagnostic and Clinical Significance (Extrasystole des Herzens) A Bickel
52 (No 53 Pp 1667 1678) Free Receptors (Freie Rezeptoren) E Weil and O Axamit.
53 *Pseudo-Paralytic, Myasthenia Gravis. (Myasth. gravis pseudopar) E Sitsen
54 *Relation of Meningococci to Gonococci. (Beziehungen der Men zu den Gon) L. Zupnik.

46 Ozena.—Fraenkel looks back over his 70 years and calls attention to the fact that his pioneer publications on the subject of ozena need scarcely any revision to day Little more is known than he taught years ago He cites this fact to emphasize the need for further research in this line, adding that science progresses like a spiral, always upward and onward, although to a casual observer it seems to be at times retrogressing

48 Measurement of the Blood Pressure.—Bing applied the Riva Rocci apparatus with a cuff on each upper arm The registered findings are tabulated as observed on a number of individuals He affirms that the blood pressure measured by the ordinary clinical apparatus depends on the contraction of the vessels below the point of compensation Changes in the lumen of these vessels are able to induce changes in the blood pressure without necessarily any corresponding changes in the pressure in the aorta It is not the terminal pressure in the brachial artery which the apparatus measures, it measures the lateral pressure in this artery

49 "Silver Spirochetes".—Schulze reaffirms on more extended experience that he has been able to inoculate rabbits with syphilis and, further, that in the successfully inoculated rabbit eye and also in human organs affected with syphilis he has constantly demonstrated the presence of Siegel's *Cytorrhyctes luis* The more or less spiral elements found in syphilitic and non syphilitic organs on application of the silver technic are nothing more nor less, he states, than tissue elements, generally terminal fibrils of the nerves Neisser has also succeeded in inoculating rabbits with syphilis, the proof of the positive results being afforded by inoculation of monkeys in turn

53 Pseudo-Paralytic Myasthenia Gravis.—Sitsen reports a case in full and tabulates the details of 29 others from the literature In 9 cases the lymphatic system showed anomalies under the microscope but autopsy was incomplete in most and further research is needed, such as examining during life the blood and all the organs the lymphatic system and the bone marrow

54 Relations Between Meningococci and Gonococci.—Zupnik comments on Ruppel's recent announcement of the production from gonococcus cultures of an immune serum which conferred protection against meningococci as well as gonococci, and, further a serum from meningococci which protected equally effectually against gonococcus infection In his own experience he has occasionally cultivated from cases of epidemic cerebrospinal meningitis a coccus which seemed to be

identical with the gonococcus He is convinced that the various clinical pictures of infectious diseases are due to the genus of the infectious agents rather than to the species The various genera and not the species, he declares, are responsible for the special pathologic changes To confirm these views he tried to inoculate human beings with gonorrhea by injecting them with his meningococci Five physicians volunteered for the experiments, but the results were negative Even the strain of meningococci which resembled gonococci so closely failed to induce any affection suggesting gonorrhea The experiments confirmed anew, he says, "the diagnostic dignity of the species in respect to the pathogenetic properties of microbes" Ruppel's interacting sera can thus be explained by the generic specificity of the toxins and antitoxins Experiments of others have further demonstrated that the agglutinins, precipitins, toxins and antitoxins, that is, all the antibodies produced by the gonococci and meningococci, are specific for the genus The term "group agglutination" is misleading, he says, "genus agglutination" is the preferable term

Deutsche medizinische Wochenschrift, Berlin and Leipsic

55 (XXXII No 51 Pp 2057 2112) Stenosis of Larynx After Intubation and Secondary Tracheotomy (Intubationsstenose des Kehlkopfes nach sec. Tracheotomie) O Franck
56 *Points for Differential Diagnosis of Peritonitis. (Diff.-diagn Kriterien der Peritonitis.) A. Barth.
57 *Varix Simulating Incarcerated Femoral Hernia. (Diagn Schwierigkeiten in der Beurteilung inkarzerierter Schenkelbrüche.) J P Haberern.
58 Rinsing the Vagina and Disinfection of the Hands (Scheidenspülung und Handedesinfektion) E Opitz
59 Sciatica Induced by Backward Flexion of the Uterus (Durch Retroflexio uteri bedingten Fall von echter Ischias) Offergeld.
60 Artificial Eardrums of Paraffin and of Silver (Künstl Trommelfelle aus Paraffin und Silber) B Gomperz
61 *Report of German Sleeping Sickness Expedition (Ueber den bisherigen Verlauf der deutschen Expedition zur Erforschung der Schlafkrankheit in Ostafrika.) R Koch
62 *Treatment of Gonorrheal Epididymitis (Behandlung der Ep gonorrhoica) C. Schindler
63 Deviation of Complement and Differentiation of Albumin (Komplementablenkung und Blutei weissdifferenzierung) P Uhlenhuth
64 Orthocentric Eyeglasses No Improvement. (Sind orthocentr Kneifer zu empfehlen?) W G Feilchenfeld
65 Ancient Arabian Surgeons (Die Chirurgie der Araber) F Durante
66 (No 52, Pp 2105-2128) Treatment of Anemia. (Behandlung der Anämien) G Sittmann Clinical lecture.
67 *Early Diagnosis of Carcinoma of Stomach (Frühdiagn des Magencarcinoms.) A. Albu
68 *Apparatus for Increasing Effect of Extension Treatment of Fractures. (Einfache Vorrichtung zur Unterstützung der Bardenheuerschen Extensions behandlung der Frakt.) K. Vogel.
69 A New Tonsillotome (Ein neues Pharynxtonsillotom.) E Barth.
70 Aspirator for Nasal Affections (Zur Technik der Saugbehandlung von Nasenleiden) J Martin
71 *Complicating Hemorrhagic Diathesis in Scarlet Fever (Komplizierende Hämorrhagische Diathesen bei Scharlach) H Klose (Commenced in No 51)

56 **Differential Diagnosis in Peritonitis.**—Barth makes a practice of dictating his diagnosis made from the clinical study of the case before the operation, and then comparing it later with the pathologic anatomic findings He has found this extraordinarily instructive, and has notes of 117 cases thus studied in detail In 90 cases of peritonitis, a rise in the temperature was invariably noted at the beginning of the affection when it originated in the appendix, vomiting occurred in every case without exception, sometimes recurring and sometimes persisting, especially when the inflammation spread rapidly over the peritoneum, but the reflex rigidity of the abdomen was the most important symptom as it occurred constantly and its location and extent were directly proportional to the inflammation in the abdominal cavity Whenever the abdomen was found rigid on both sides the peritonitis invariably proved to have extended to both sides, but when the rigidity was restricted to one side, the inflammatory process was always found limited to that side This rule does not apply to serous effusions, these were found in his experience invariably sterile, and his 16 patients in this class all recovered. He ascribes the serous effusion to distant toxic action from an encapsulated focus and the prognosis is good He explains the rigidity of the abdominal walls as a local symptom of irritation of the sensory nerves of the parietal peritoneum from certain special chemical conditions The more intense the toxic action, the greater the rigidity In peritonitis originating in the female genital organs, gonorrheal or puerperal, rigidity was never observed. In gonorrheal peritonitis the pulse rate increased much more rapidly than with appendiceal peritonitis, meteorism was frequently noted, and the abdomen was very painful, especially on pressure There was also always characteristic tenderness in the posterior roof of the vagina, and the slightest movement of the uterus was painful Gonorrheal pelveoperitonitis generally develops at the time of the menses Palpation of the tubes at this stage is not free from danger and is unnecessary After the peritonitis had subsided he invariably found the characteristic thickening of the ureter or tubes Differentiation is important as gonorrheal pelveoperitonitis does not indicate operative intervention, and a fatal outcome from extending peritonitis is not known to him except in cases in which the focus in the ovary was not left to subside spontaneously under rest If the protecting adhesions are broken up by rough manipulations, the prognosis of course, becomes bad In puerperal streptococcus peritonitis the abdomen is much less painful and there is no rigidity as in appendiceal peritonitis, meteorism is a prominent feature Rigidity was observed in a case of rupture of the liver with suppuration, and with colon bacilli in the pus, and Trendelenburg also observed it in a case of rupture of the spleen It was absent on the other hand, in 5 cases of sterile tubal abortion

57 **Varix Simulating Femoral Hernia.**—Haberern describes a case of supposed femoral hernia in a woman of 49 who had worn a truss for nearly four years Symptoms of incarceration indicated operative interference, undertaken under consultation, when the trouble was found to be a large varix After evacuation and ligation of the varix all disturbances ceased He reviews the similar cases on record In some the varix simulated an inguinal hernia

61 **Success of Arsenic in Sleeping Sickness**—See news item on page 149

62 **Treatment of Gonorrheal Epididymitis.**—Schindler writes from Neisser's clinic to extol the value of puncture in treatment of acute gonorrheal epididymitis It is impossible, he states, to learn otherwise of the presence of pus and to heal the process In one case there was high fever, and the process persisted refractory to the usual measures One puncture proved negative, but a second puncture brought thick pus, after which the process rapidly subsided Even at the best, he remarks, the relics of the affection are liable to entail more or less serious functional disturbances later and no pains should be spared in prophylaxis The physician should strive to restrict the primary infection to the anterior urethra and the public should be educated to consult a physician at the first slight symptoms of infection and not to wait until possibly irreparable damage has been done

67 **Early Diagnosis of Gastric Cancer**—Albu insists on the great diagnostic importance of a gradual loss of weight not withstanding a nourishing diet with easily digestible food given in small amounts at frequent intervals If the patient continues to lose weight the assumption of a malignant process is justified If attention is directed to the stomach, symptoms suggesting atrophic chronic gastritis point to carcinoma in the fundus, while symptoms suggesting stenosis of the pylorus indicate cancer in the pyloric region particularly when the amount of hydrochloric acid slowly declines from week to week In his experience the history never has had the slightest value in the diagnosis of gastric cancer An inoperable lesion may lurk behind the slightest subjective disturbances Only by the most attentive observation of the course of the objective signs of the disease may we hope to diagnose it in its early stages that is before a palpable tumor is discovered He reports 2 cases in which an operation was undertaken on an early diagnosis based principally on the constantly progressive loss of weight In the first case a man of 52 lost 6¼ pounds in the course of four and one half weeks, in the second a woman of 45 lost 10 pounds in about four months Both patients were constantly under observation on a nourishing comparatively well rehashed diet The operation in the first case revealed a flat tumor smaller than a silver dollar on the posterior wall In the second case the tumor

was scarcely as large as a walnut, and had developed on the basis of an old, flat ulcer in the pyloric region. Albu remarks that it certainly must be one of the smallest gastric carcinomata ever diagnosed in the living subject. The patient is in good health to date.

68 **Apparatus for Improved Extension.**—Vogel's apparatus consists of a triangular iron frame with three legs, like a small triangular bed, on which the patient's arm or leg can be placed to maintain sufficient abduction in extension treatment of fractures. He has slightly modified the Bardenheuer apparatus as he shows in his illustrations.

71 **Complicating Hemorrhagic Diathesis in Scarlet Fever.**—Klose reports in detail a case of mild petechial scarlet fever complicated by a hemorrhagic diathesis with remittent manifestations and exacerbations. The patient was a girl of 6, and the clinical diagnosis was chronic hemorrhagic purpura following scarlet fever. Autopsy revealed a general hemorrhagic diathesis with fatty degeneration of the myocardium. The scarlet fever occurred in May, 1904, and the child succumbed to exhaustion two years later. She had been previously healthy, with healthy parents. The case further shows the benefits of gelatin treatment, four courses of 10 per cent solution of gelatin having been followed by arrest of the hemorrhages in 24 or 48 hours, and absorption of the blood in from 12 to 45 days. A total of 520 c.c. of the 10 per cent solution were injected subcutaneously in addition to internal administration, without harm, but the extremely chronic course of the affection prevented regeneration of the blood.

Jahrbuch f. Kinderheilkunde, Berlin.

Last indexed page 341.

72 (LXIV, No. 6, Pp. 779-896.) *Gonococcus Infection in Children. Its Prevalence in Institutions and Its Prophylaxis. (Gon. Inf. bei Kindern mit bes. Bezugnahme auf deren Vorkommen in Anstalten und die Mittel zur Verhütung derselben.) L. Emmett Holt.

73 Innervation of the Mammary Gland. (Zur Physiologie der Milchdrüse.) K. Basch.

74 * Congenital Megacolon not Congenital but Acquired. (Ungewöhnlich umfangreicher Dickdarm bei Kindern.) W. E. Tschernow.

75 Physical Proportions of the Newborn. (Körperproportionen des Neugeborenen.) S. Weissenberg.

76 *Grooves in the Thighs of Children. (Oberschenkelfalten des Kindes.) M. Cohn.

72.—See THE JOURNAL, vol. xliv, 1905, page 1146.

74 **Enlargement of the Large Intestine in Children.**—Tscherny reviews the history of Hirschsprung's "megacolon congenitum," summarizing the various cases that have been published and adding two from his own experience. He is convinced that the condition is not congenital, but is acquired from some obstruction. The various conditions causing the obstruction are generally located in the lowest segment of the sigmoid flexure, especially at its junction with the rectum. Treatment should include measures to empty the bowels temporarily with an artificial anus, and later entero-anastomosis, uniting the cavity of the sigmoid flexure or the upper part of the descending colon with the ampulla of the rectum. His two cases show the possible advantages of treatment on these principles. Another patient, a girl of 4, thus operated on in 1904, is still in good health, and Björksten has had a similar experience in one case. In short, "megacolon congenitum" is not congenital, he declares, but acquired, and is amenable to treatment.

76 **Folds in Infants' Legs.**—Cohn remarks that the folds and grooves in the legs and arms of plump infants have been studied by artists, but otherwise little attention has been paid to them. He ascribes their origin to the position of the child in the uterus. Asymmetry in the adductor fold suggests the possibility of congenital dislocation of the hip joint, before any other sign of it is apparent, although asymmetry is frequently observed in normal children. The depth of the grooves is an index of the child's general condition, as any affection tending to loss of flesh smooths out the grooves more or less, and they never return to the same extent.

Monatsschrift f. Geb. und Gynäkologie, Berlin.

Last indexed page 341.

77 (XXIV, No. 6, Pp. 703-846.) Comparative Physiology of the Menstrual Cycle. (Zur Kenntnis des menstruellen Cyklus.) M. van Herwerden.

78 *Obstetrics in Maternities and at the Home in Their Relation to Artificial Premature Delivery. (Anstaltsgeburtshilfe und Hausgeburtshilfe.) O. v. Herff.

79 Treatment of Delivery with Contracted Pelvis. (Geburt bei engem Becken.) E. Bauer.

80 *Parathyroid Insufficiency in Respect to Eclampsia and Tetany. (Experimentelle Versuche zur parathyr. Insuff. in Bezug auf Eklampsie und Tetanie, mit bes. Berücks. der antitoxischen Funktion der Parathyroideæ.) V. Frommer.

81 Review of Recent Works on Suprarenal Preparations and Gelatin as Hemostatics in Gynecology and Obstetrics. (Nebennierenpräparate und Gelatin.) M. Neu.

82 Recent Works on Appendicitis in Women. (App. bei der Frau.) R. Klein.

78 **Advantages of Artificial Premature Delivery in Case of Contracted Pelvis.**—If a woman is delivered in a maternity, von Herff thinks that expectant treatment, with possibly Cesarean section or pubiotomy at need, should be the rule. But if delivered at home, the dangers of these operations and other considerations should impel the physician to advise artificial premature delivery as promising far better results with less danger for the mother. The relations between the head and the pelvis must be carefully determined beforehand, preliminary version should be avoided as far as possible, as also the use of the high forceps, and pubiotomy should be the last resource. He cites his experiences and various statistics and urges that more attention should be paid in the medical schools to instructing the students in obstetrics as applied in the home. Far more childbirths occur in the home than in a lying-in institution, and the conditions vary widely in the two.

80 **Parathyroid Insufficiency in Respect to Eclampsia and Tetany.**—Frommer's experiments on animals have confirmed the assumption that the parathyroid glands have an antitoxic function, the lack of which entails tetany. Partial removal of the parathyroids in the non-gravid rabbit does not cause any appreciable disturbances, but total removal may have a fatal effect. The entire removal of both parathyroid and thyroid glands may induce fatal tetany. Five grams of sterilized, normal human placenta tissue introduced into the abdomen of a rabbit or other animal after partial removal of the parathyroids caused invariably severe disturbances, evidently inducing extremely toxic metabolic products. The young all died later, although apparently healthy. He describes the anatomy of the human parathyroid glands. He found four in 12 cadavers and only two in two others. They are less transparent than lymph glands and are further distinguished by the reddish, yellowish tint. They are round or oval, from 2.5 to 15 mm. in diameter, and a little tougher in consistency than the thyroid gland. The article reviews the present status of our knowledge in regard to the parathyroids, including Vassale's theory and his method of treating eclampsia with extract of beef parathyroid substance.

Münchener medizinische Wochenschrift.

83 (LIII, No. 52, Pp. 2565-2588.) *Dosage and Mode of Administering Anesthetics for Spinal Anesthesia. (Lumbalanæsthesie.) C. Hofmann.

84 Proteolytic Ferment of the Leucocytes and the Autolysis of Normal Human Blood. (Proteolytische Ferment und Autolyse normalen Menschenblutes.) F. Erben.

85 *Technic of Spirochete Staining. (Spirochätenfärbung.) A. Kraus.

86 Pseudoarthrosis of the Styloid Process of the Ulna. (Pseudarthrose.) A. Stoffel.

87 Earning Capacity After Healing of Artificial Anus. (Erwerbsbeschränkung nach Heilung eines Anus praeternaturalis.) M. Mayer.

88 Epidemic Cerebrospinal Meningitis and Its Origin in Mines. (Grubeninfektion beim Entstehung der Genickstarreepidemien.) L. Jehle.

89 Graphic Records of Lung Findings. (Bildliche Darstellung von Lungenbefunde.) Besold and Elkan.

90 Active Principle of Vaccine. (Vakzineerreger.) J. Siegel.

91 (LIV, No. 1, Pp. 1-56.) Statistics and Pediatrics. (Statistik und Säuglingsfürsorge.) A. Schlossmann.

92 The Bonn Station for Milk for Infants and Advice for Mothers. (Mutterberatungsstelle und Säuglingsmilchküche.) Esser.

93 The Dispensary for Infants at Weissenburg. (Säuglingsfürsorgestelle.) H. Doerffler.

94 Determination of Toxin in the Blood in Diphtheria. (Nachweis des Toxins in dem Blute des Diphtheriekranken.) C. Fraenkel.

95 *Air Massage. (Luftmassage.) R. Klapp.

96 Relations Between the Orbit and the Pterygopalatine Fossæ. (Bez. der Orbitae zu den Fossae pteryg. palat.) W. Krauss.

97 *Filling the Bladder with Oxygen to Aid in Cystoscopy and Radiography. (Füllung der Blase mit Sauerstoff zum Zwecke der Cyst. und Rad.) L. Burkhardt and O. Polano.

98 Treatment of Gonorrheal Posterior Cystitis by the General Practitioner. (Gon. Posteriorzystitis.) Kromayer.

99 *Two Cases of Aural Vertigo Cured by Operation (Ohrsch windel) Iscmer
100 *Treatment of Gastrointestinal Hemorrhages with Fluid Gelatin (Magen und Darmblutungen) A Mann

83 Dosage for Spinal Anesthesia.—Hofmann announces that he has been surprised to find that weaker dilutions induce anesthesia as completely as the customary dosage of the anesthetics He used to inject a 5 per cent solution, but now uses only 1 per cent, increasing the amount of fluid to correspond His experience has shown that the larger amount of fluid required aids the induction of the anesthesia while materially reducing the by-effects

85 Improved Technic for Spirochete Staining.—Kraus commends the Giemsa technic, preceded by fixation of the specimen *with the fumes of osmic acid*, according to the Hoffmann Halle modification This shows up the spirochetes well, but the effect is liable to be marred by precipitation of the stain, and Kraus has devised a means to avoid this The specimens prepared by the above technic are placed for about half a minute in a 30 per cent aqueous solution of tannin The results are most excellent

95 Massage with Air.—Klapp has been studying the reactive hyperemia induced by facing the wind for some time, and has been striving to apply the same principle in therapeutics He has nothing practical yet to announce in this line, but in his research on this subject he has learned the efficacy of strong jets of air as a means of massage He uses a one horse power motor to produce the jet of air which issues from an adjustable nozzle, about 8 cm in diameter The air can be hot or cold, and the jet is so strong that it hollows out a depression in the tissues and the skin piles up in folds around the spot—an actual massage of the skin and tissues below without any surface friction The part feels cold and empty if cold air has been used, but a reactive hyperemia follows at once on the application of warmth to the part, the reaction increasing in intensity with each sitting The indications for this "frictionless massage" are the same as for any massage It has the advantage of being painless, the air massage is agreeable rather than otherwise, and there is no danger of displacement of a reduced fracture It is also useful for promoting the absorption of infiltrates and edema after subsidence of an inflammatory process If the continual jet of air is constantly turned on and off in rapid succession the result is a kind of vibratory massage, an absolutely painless, frictionless shaking of the parts Klapp is assistant at Bier's clinic at Bonn

97 Filling the Bladder with Oxygen for Cystoscopy and Radiography.—Burkhardt relates that when the bladder is irritable he has found it a great advantage to fill it with oxygen, instead of air or fluid, as a preliminary to cystoscopy or radioscopy The oxygen is chemically pure and no danger of embolism need be feared from it, while it has actually a soothing and sedative action on very irritable bladders This result is similar to Hoffa's experience with it in joint affections Comparative radiography, with and without the oxygen, showed that the shadows cast by bladder stones were much more distinct with the oxygen and the details of the bladder walls could be inspected more clearly The advantage was so marked that it suggests the possibility of introducing oxygen into the hilus of the kidney through the ureter catheter, he declares, in puzzling cases of kidney stones

99 Aural Vertigo Cured by Operation.—The two cases described were remarkable in the sudden onset of the vertigo, its severity, and its prompt subsidence after operative treatment of a long chronic middle ear affection.

100 Treatment of Gastrointestinal Hemorrhage with Fluid Gelatin.—Mann reports nine cases of gastrointestinal hemorrhage cured by administration of a tablespoonful of a mixture of 2 gm citric acid and 20 gm syrup of bitter orange peel to 200 gm of fluid gelatin. One patient was at the eighteenth day of typhoid fever when a little blood was observed in the stools and the gelatin mixture was given every two hours, no further traces of blood were observed The gelatin was given several days in another typhoid case with the same result The other patients suffered from ulcer or cancer of the stomach, and in every instance the blood vanished from the stools on the administration of the gelatin The only exception was in a case of very severe typhoid fever Serious intestinal hemorrhage suddenly occurred, but was arrested by the use of various hemostatics, including the gelatin mixture, and the stools next day were free from blood. Another and immediately fatal hemorrhage occurred a few days later and autopsy revealed multiple serious intestinal ulcerations In all the other cases the benefit was prompt and marked without the use of any other measures

Virchow's Archiv, Berlin

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101 (CLXXXVI No 3 Pp 321 524) Finer Structures of the Bones with Special Regard to Rachitis (Feinere Knochenstrukturen) F Dyrenfurth
102 *Kidney Cysts (Nierencysten) C Braunwarth
103 Physiology of Islands of Gastric Mucosa in Upper Segment of Œsophagus (Magenschleimhautinseln im obersten Oesophagusabschnitte) H Schridde
104 Histology of Nodose Goiter (Struma nodosa) L Michaud.
105 *Energy of Growth and Etiology of Malignant Tumors. (Wachstumsenergie und Ft. der bösartigen Geschwülste) P Kronthal
106 (CLXXXVII No 1 Pp 1 196) Development and Absorption of Experimentally Induced Amyloid Substance in the Salivary Glands of the Rabbit (Amyloidsubstanz in den Speicheldrüsen von Kaninchen) W Dantschakow
107 Amyloid Degeneration of the Heart. (Herzamyloid) P Hnebschmann
108 Vaginal Cysts (Cysten der Vag) A T Högström
109 Case of Missing Thyroid Gland and Vicarious Thyroid Tumor on the Tongue. (Athyreosis und vikar Zungenstruma) E *Ungermann.*
110 *Pathology of Branchial Parathyroids (Path der branch Epithelkörperchen) T v Verebely
111 Dwarf Growth in *Related Families* in High Alpine Valley (Mehrfacher Zwergwuchs) Schmölck
112 *Icterus Ascites and Enlargement of Spleen in Cases of Cirrhosis of Liver (Milztumor Icterus und Ascites bei Leber cirrhose) F Klopstock
113 Histologic Characteristic Enlargement of the Spleen Generally Familial (Eine Systemerkrankung des lymphatisch hämopoetischen Apparates Typus Gaucher) F Schlagenhaufer
114 *Laws Regulating the Natural Resistive Forces at Various Ages (Altersgesetz der nat. Widerstandskraft) L Ascher
115 *Source of Pulmonary Anthracosis of the Lungs (Ursprung der Lungenanthrakose) H Beitzke

102 Kidney Cysts.—Braunwarth states that the normal kidneys of fetuses newborn infants and nurslings contain actual cysts in about 50 per cent He ascribes them to arrested development, and states that they are liable to increase in size with advancing years especially in case of inflammation in their vicinity

105 Etiology of Malignant Tumors.—The article is subdivided as "Relations of the Malignant Tumor to Its Bearer," "The Cell Is the Elementary Organism," "Form and Function of the Cell Determine the Conditions Under Which It Lives" "Fertilization and Segmentation of the Cell" and "Why the Previous Conceptions in Regard to Malignant Tumors to Date Have Not Been Satisfactory" The aim of Kronthal's argument is to the effect that the cells of the malignant tumors are not old cells of the individual, whose character has been transformed, but they are the young descendants of some freshly fertilized cells of the individual bearing the tumor or of another individual of the same species The tumor cell is the descendant of a union between epithelial elements or migrating cells Freshly fertilized cells show the greatest energy of growth The cells of sarcoma and carcinoma, like the migrating leucocytes, have the faculty of ameboid movements This enables them, like the migrating leucocytes, to emerge free on the mucosa and thence find their way to another individual That they often do break loose is shown by the metastases Wherever the migrating cell or the foreign tumor cell gets a hold and remains wherever the fertilization of a fixed epithelial cell occurs, there the cancer develops

110 Pathology of Parathyroids.—Verebely reviews the cases of anomalies in development of the parathyroids that have been published and three cases of cysts from his own experience, with others of primary affections of the parathyroids and secondary disturbances

112 Icterus, Ascites and Enlargement of Spleen with Cirrhosis of the Liver.—Klopstock found ascites in 172 out of 250 cadavers with cirrhosis of the liver He believes that these findings indicate that the same toxic cause inducing the cirrhosis is also responsible for the ascites The frequency of coincident intestinal tuberculosis was also striking The absence of ascites in two instances shows that the effusion is not re

sponsible for the predisposition to the tuberculous affection Other facts which he cites sustain his assumption that cirrhosis of the liver may result directly from tuberculous infection In short, he insists that although the prevalence of cirrhosis of the liver in hard drinkers and the predisposing influence of alcohol are not to be denied, yet the decisive rôle in the production of the affection does not belong to them, but to bacteria and their toxins He noted cholelithiasis in 8 6 per cent of 209 men, and in 17 per cent of the 41 women in his material He ascribes the benefit of extirpation of the enlarged spleen in certain cases to the fact that the spleen is not only the dumping ground for all the foreign bodies circulating in the blood, but is also able to bind and hold toxic substances The operation removes the organ which, by its faculty of attracting toxic substances, becomes the source of a condition of chronic intoxication Icterus was observed in 66 of the 250 cadavers

114 **The Age Laws of the Natural Resisting Forces**—Ascher presents a number of curves drawn from vital statistics and other sources, all of which demonstrate, he thinks, that the natural resisting forces are at their highest point during the age from 5 to 15, and decline each way in a regular progression Knowledge of this law will prevent misconception in many lines in biology, pathology and hygiene It should be borne in mind, he says, in compiling vital statistics One of the practical results of this law is that the outlook for sanatorium treatment of tuberculosis is most promising between 16 and 20

115 **Origin of Anthracosis of the Lungs**—Beitzke found that insoluble particles passed through the intact intestinal wall of animals and were distributed in the lymph to various organs, but the lungs were least affected Scarcely any of the particles found their way into the lungs, while other organs, especially the liver and spleen, were gorged with them The particles which he did find in the lungs he attributes to preceding inhalation

Norsk Magazin f Lægevidenskaben, Christiania

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116 (LXVII No 11, Pp 1249 1376) *Epidemics and the Weather (Genius epidemicus.) A Magelssen
17 Diplococcus Found in Noma. (Bakt undersøgelser over et tilfælde af noma) E Hellesen
8 *Experimental Polyuria and the Hanssen 'Variability Test' in Examining Kidney Functioning (Variabilitetsprøven og exp polyuri) J Nicolaysen

116 *Epidemics and the External Forces of Nature*—Magelssen believes that the curves for the biologic phenomena as well as for the medico pathologic are nothing but a somewhat modified reflection of the variations of the weather He thinks that this can be mathematically established, and that the special meteorologic causes for each sickness might thus be rendered evident He regards the vital phemonena as a consequence a reflection of the external forces that surround the organism, acting on it, transforming it and given back The weaker the organism the less resistance it opposes to the transforming action of external influences The cause of the so called "constitutio epidemica" or "genius epidemicus" should be sought in connection with the external forces of Nature, the beneficent as well as the injurious and the destructive which manifest themselves to us in the various elements of the weather

118 **Tests of Kidney Functioning**—The "variability test" is a combination of extreme dilution of the urine on one day with fluid diet, followed two days later with a dry diet, thus inducing extreme concentration of the urine The test requires six days, and the patient must stay in bed, but the findings are extremely instructive as the kidney functioning in these two directions of dilution and concentration is compared, the specific gravity of the urine reaching its lowest and highest figures in turn Nicolaysen examines the urine every two hours and gives the curves of 28 cases of various kidney affections in which these tests were applied, with the findings in 18 healthy persons He also gives the curves of three cases in which he applied the experimental polyuria test after catheterization of the ureter, having the patient drink three glasses of water or water gruel, he examined the urine every half hour before and after

Archivio per le Scienze Mediche, Turin

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119 (XXV No 3 Pp 217 340) Mononuclear Leucocytes (Sui globuli bianchi mononucleati) A Ferrata
120 Postmortem Forms of Myelin (Forme mieliniche postmortali) D Bizzozero
121 Branchiogenic Relics and Tumors Originating in Them (Residui branchiogeni e neoformazione cui danno origine) G Mioni
122 *Experimental Study of Removal of Thyroids and Parathyroids (Ablazione delle tiroide e delle paratiroide) M Segale
123 Supernumerary Muscles in Back of Hand (Muscoli sopran del dorso della mano) C Bruni
124 *Localization of Typhoid Bacilli in Biliary Apparatus (Loc del bac. del tifo nell apparechio bil) P Sisto

122 *Ablation of Thyroid and Parathyroids*—Segale tabulates the results of much experimental research in this line They demonstrate that tetany, although of frequent development after thyroidectomy, is not a fundamental symptom It is similar to death from dilatation of the heart in a case of tuberculosis, the heart disturbances are not the essential feature of tuberculosis After parathyroidectomy such profound disturbance of the metabolism occurs that all efforts on the part of the organism to repair it are absolutely ineffectual The old notion of cachexia strumipriva is based on solid foundations, he states, and means more than ever before, only the disturbances are not due to the extirpation of the thyroid, but rather to the parathyroidectomy unwittingly done at the same time The symptomatology is the same whether the parathyroids alone or the parathyroids plus the thyroid are extirpated True cachexia strumipriva kills in from 15 to 16 days, incidentally by tetany perhaps, but in reality by the intense disturbance of the metabolism resulting from lack of the parathyroid function

124 *Localization of Typhoid Bacilli in Biliary Apparatus.*—Sisto describes two cases in which a suppurative process developed in the gall bladder in the course of typhoid fever In the first case ulceration progressed to necrosis and perforation of the walls of the gall bladder The resulting peritonitis remained limited and encapsulated, but the patient succumbed later to diffuse peritonitis from perforation of an intestinal ulceration In the second case the typhoid fever was of a mild type, but very protracted In the seventh week a suppurative cholecystitis developed, but without ulceration or necrosis The process spread to the liver, where numerous abscesses followed. The symptoms in this case were merely a continuous dull pain in the right upper abdomen, increased by pressure, with rigidity of the abdominal wall This pain was probably the sign of a slow development of the cholecystitis and involvement of the liver The patient succumbed the ninth week of the typhoid fever after presenting symptoms of broncho pneumonia

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits or in the interests of our readers.

THE PRACTITIONER'S MEDICAL DICTIONARY An Illustrated Dictionary of Medicine and Allied Subjects including all the Words and Phrases Generally Used in Medicine By George M Gould A M M D Editor of *American Medicine* Containing among other new features the terms of the Basle anatomic nomenclature and the standards of pharmaceutic preparations as given by the eighth decennial revision of the U S P Illustrated Flexible leather Pp 1043. Price $5 00 net. Philadelphia P Blakiston s Son & Co

AMERICAN POCKET MEDICAL DICTIONARY Edited by W A N Dorland A M M D Assistant Obstetrician to the Hospital of the University of Pennsylvania Containing the pronunciation and definition of all the principal terms used in medicine and kindred sciences with over 60 tables Fifth edition Flexible leather Pp. 578 Price $1 00 net Philadelphia W B Saunders Company 1906

CHEMICAL PATHOLOGY A Discussion of General Pathology from the Standpoint of the General Processes Involved By H Gideon Wells Ph D M D Assistant Professor of Pathology in the University of Chicago. Cloth Pp 549 Price $3 25 net Philadelphia W B Saunders Company 1907

ANATOMY FOR NURSES By E R Bundy, M D Member of the Medical Staff of the Woman s Hospital Philadelphia With a glossary and 101 illustrations 34 of which are colored Cloth Pp 252. Price $1 75 net Philadelphia P Blakiston s Son & Co 1906

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Address

THE FACTORS OF SAFETY IN ANIMAL STRUCTURE AND ANIMAL ECONOMY *

S J MELTZER, M D
NEW YORK CITY

The living animal body is like a machine in action Like a machine, its structures are subject to a variety of stresses and, like a machine, the work is accomplished by an expenditure of energy derived from a supply of fuel I intend to discuss in this lecture whether, as in the human made machines, the structures and functions of the animal mechanism are provided with factors of safety The term "factor of safety" is employed in engineering to designate the margin of safety required in the building of engines, bridges, houses etc For instance, in designing a boiler, if the tensile strength of the steel of which the plates and stay-bolts are made is 60,000 pounds per square inch, the actual stress which is allowed for the work of the boiler should not be more than 10,000 pounds per square inch for the plate and not more than 6,000 pounds per square inch for the stay-bolts, that means the stress to which the plates or the bolts may be exposed in the boiler should only be one-sixth or one-tenth of the actual strength of the steel The factors of safety are said to be here six for the plate and ten for the bolts In some instances the required factors of safety may be as low as three, in other cases again they may be as high as twenty and even forty The character of the stress to which the structures might be subjected is an important point in deciding on the size of the margins of safety Structures, for instance, which are to be employed for alternating loads require high factors of safety, the highest margin of safety is required when the structures are subjected to rhythmic shocks In constructing a bridge or a machine, it is then calculated that the structures should be capable of withstanding not only the stresses of reasonably expected maximum loads, but also the stresses of six or ten times the size of such loads The factor of safety has its foundation in our ignorance of what might happen and in the reasonable desire to meet unexpected contingencies Some writers are, therefore inclined to designate the factors of safety as factors of ignorance.

It is obvious that the factors of safety are applicable not only to the structures but also to the supply and expenditure of energy of the machine The supply of fuel is calculated to have the engine in readiness not only for expected maximum work but also to be capable of meeting unexpected contingencies On the other hand when there is no exceptional need for it no engine is allowed to perform maximum work, this economy here is again a factor of safety

* Harvey Society Lecture delivered at the New York Academy of Medicine Dec. 15 1906.

Are the structures and the functions of the living animal body provided with such factors of safety? As far as I know, that question has never yet been clearly raised, and certainly was never made the subject of a direct investigation There is, however, no lack of casual remarks bearing on that problem and these are manifestly unfavorable to an assumption of the existence or requirement of factors of safety in animal organisms On the contrary, there are many to whom it is apparently self-evident that Nature is economical and waste-neither material nor energy Theories and practical suggestions are based on such a view as a premise which seems to their authors to require no special proof Verworn, for instance, asserts that the assumption of special inhibitory nerves for skeletal muscles can be rejected, *a priori*, because the presence of such nerves would be a waste of matter and energy and in contradiction with the prevailing principle of economy in the animal body Another instance is the extreme position held by some recent writers with respect to the supply of energy to the animal machine Factors of safety, maximum or optimum supply of fuel, do not come in for a consideration in the discussion of these writers

A MINIMUM DIET THE IDEAL STANDARD OF DIET

The argument is directed against the use of a dietary standard which represents the average mean supply of energy, the minimum supply of food being considered as the ideal standard of diet. As is known to all, Professor Chittenden and his co-laborers have carried out nutrition experiments of long duration on a number of men The essential feature of these experiments was the use of a low proteid diet, in some instances the diet was also combined with a considerable reduction in the caloric values of the food All the subjects of the experiments retained their usual health Professor Chittenden admits that the diet used in these experiments, especially with regard to the proteid intake, represents the minimum requirement of the human body, he nevertheless earnestly advocates its acceptance as a general standard of diet, assuming *a priori* that the minimum food with which a number of men can manage to live for some time without harm is the desirable standard of supply of energy for all animal machines Whereas in the economy of the human-made mechanisms and in fact, in the economies of all human organizations decrease in supplies and increase in expenditure leads invariably to disaster it would seem that in the physiologic economy of the living mechanism such a procedure may even lead to a greater efficiency of the mechanism Professor Irving Fisher tells us recently that nine Yale students under the influence of prolonged mastication of a diet greatly reduced in proteid and in caloric values gained very much in endurance in perfo
physical tests

Is there, indeed, a difference betw

of human-made organizations and those of the living organism? I have stated above that the factors of safety in mechanical constructions are, after all, only factors of ignorance Possibly wise Nature constructs her organisms on such an efficient principle which permits the accomplishment of the greatest amount of work on a minimum supply of material and energy It would be a fascinating distinction between a dead mechanism and a living organism, if true

SAFETY AND ECONOMY IN THE ORGANISM

The subject of this lecture will be an investigation of this question, an investigation whether the structures and functions of the animal organism are constructed with a special consideration for the greatest economy or for the greatest safety Or, to leave the purposefulness of the organization out of discussion, I may, perhaps, put it more correctly by saying that it will be essentially an investigation into the ratios of the supply of material in many organs of the body to the amount of work they are expected to perform I believe that the investigation may lead to some instructive general conclusions of a theoretical and practical character As already stated, the problem seems to me to be new and, as far as I know, no original investigations were carried out with the special purpose of solving it There are, however, a great many well-established facts brought out in theoretical and practical work undertaken for other purposes, which are, nevertheless, capable of throwing a good deal of light on our problem Such facts have the advantage of being unbiased witnesses, since no preconceived theory was at the bottom of their discovery My task will consist in reviewing these facts as far as they are available, or more correctly, as far as they are known to me, and bringing them impartially in proper relation to our problem

FACTORS OF SAFETY IN THE PLAIN TISSUES

I shall commence with the plain tissues of the body In the multitude of studies on these tissues there are not many investigations which could be utilized for our purpose However, a series of careful investigations, recently published by Triepel, have an intimate bearing on our problem Triepel investigated the elasticity and resistance of several tissues, like muscle, tendon, elastic tissue, bone, cartilage, etc For us the following statements are of special interest For muscle, tendon and elastic tissue, Triepel found that the maximum stretching which may occur in the animal body is not far below that degree which can cause tearing of these tissues The resistance of bones and cartilages to a crushing stress is, however, far above any stress which might occur in normal life With regard to muscle, tendon and elastic tissue it appears therefore that the structures in themselves have practically no factors of safety above the maximum stress to which they might be subjected Any unexpected tension above the maximum occurring in ordinary life might lead to a rupture of these tissues Triepel, however, calls attention to the fact that the degree of stretching of these tissues is greatly limited by their connections with the structures surrounding them, especially by the skeletal parts These limitations will, for the most part, prevent these tissues from reaching their breaking point We may then say that muscle, tendon and elastic tissues have no factors of safety in the structures themselves, but they are provided nevertheless with some such factors by their connections with other tissues The bones and cartilages, on the other hand, which are but little influenced by other tissues, are provided with a very large margin of safety over the stresses to which they might normally be exposed Triepel here makes a remark which has a direct bearing on the problem with which we are dealing He says that the large surplus of material in bone and cartilage tissue shows that Nature does not follow the law of obtaining a result by the smallest possible means

It is worth noticing that the large margin provided here can not have the object of offering protection against unexpected contingencies coming from within the body, as these, according to Triepel, will never reach even the yield point of these tissues The protection is here provided against contingencies coming from without, against injuries of external origin It is a protection not against an internal, a physiologic calamity, but against an external, so to say, pathologic contingency

SAFETY FACTORS IN THE MORE COMPLEX TISSUES

A sufficient number of readily available data for the study of our problem we find in researches on complex tissues or organs We shall begin with the bilateral mechanisms Here are, in the first place, the kidneys Every medical man now knows that one kidney can be removed with entire impunity if the other kidney is normal The amount and the composition of the urinary secretion remains practically unaltered, and this even soon after the removal of the kidney That can only mean that normally the kidney has an abundance of tissue which can do, at a moment's notice, at least twice the normal amount of work From the experimental work of Tuffier, Bradford and others we know that at least two-thirds of both kidneys may be removed without serious detriment to the animal's life or to the secretory function of the kidneys At the same time we must remember that the normal secretion represents by no means the minimum amount of work of the kidney We know that the average quantity of the urine, as well as the normal quantities of its various constituents, may be greatly reduced without any visible detriment. In fact, there may be anuria for many days without any serious symptoms, and perhaps also without serious consequences, if the anuria be not due to a disease of the kidney, but to such causes as hysteria, calculus, reflex or compression The margin of safety in the tissue of this eliminating organ amounts, at least, to twice its normal need

This would seem to be an unreasonable luxury, a waste But what a blessing For a score of years, or more, in many of us the kidney is gradually losing some of its valuable material from one cause or another without any symptom, without a reminder sufficient to spoil our pleasure of life or to hamper our activities Not until that luxurious surplus is approaching its exhaustion do we get a warning But then our work is mostly done and our time limit nearly reached

Next we shall consider the lungs, an organ of supply and elimination of first order We all know that life may continue though a great part of the lungs be destroyed, if only the disease which caused the destruction came to a standstill We know that in some cases of pneumonia one lung can be entirely consolidated without seriously impairing the process of ventilation Furthermore, a patient whose thorax was freely opened to evacuate a one-sided pleural abscess has, after the opening, less dyspnea than before In empyema, as in pneumonia, it is essentially the infection and intoxication with their reactions which cause the apparent disturbance in the

respiratory mechanism, and not so much the mechanical interference with the ventilation of the corresponding lung Since the classic experiments of Regnault and Reiset, many investigators have stated that compression of one lung, or a unilateral pneumothorax, exerts very little influence on the respiratory exchange of gases Hellin reported, recently, a series of experiments on rabbits in which the right lung was completely removed The right lung of the rabbit has four lobes and is much larger in volume than the left, that means that more than one-half of the lung tissue was removed Most of the animals survived the operation and some lived a year and longer Except for a temporary moderate dyspnea, lasting only an hour or two, the animals were in a normal condition, and the respiratory quotient continued to be, after the removal of the lung, exactly as it was just before the operation We see, then, that the normal process of respiration can be carried out with at least one-half of the lung tissue and probably with a good deal less We have here, with regard to the quantity of tissue, a factor of safety equal at least to two which does not appear to be an excessive margin considering the importance of the function which that tissue has to carry out

Of the bilateral organs of reproduction, we know from numerous surgical operations that the removal of one ovary or of one testicle does not interfere in the slightest degree with the corresponding functions of the individual For the female organs it has been frequently established that even a small part of one ovary is sufficient to carry on the function of menstruation and conception In fact, there are a number of reliable cases on record in which pregnancy occurred after the removal of both ovaries, which cases were explained by the assumption that some particle of normal ovarian substance was caught in the ligature and retained in the body, and this fragment was then sufficient to carry out the function of ovulation and conception

For the testicles we may safely assume also that a small fragment of one testicle left in the body would be capable of carrying on the function of reproduction But I did not come across experimental or surgical data which directly bear out this assumption There are definite data with regard to the secondary sexual characteristics in fowls If in the process of castration some fragment of one testicle is left, the cock according to Foges and others, does not lose the comb and other secondary sexual characteristics However these secondary characteristics are probably connected with the internal secretion of these organs and their persistence might not be a sufficient proof for the persistence of the function of reproduction At any rate, it is sufficiently evident especially as will be seen later that the tissues of the organs of reproduction are greatly in excess of the maximum need of the chief function of these organs

Among the bilateral organs there are two whose functions are carried on exclusively by internal secretion I mean the thyroid and the adrenal glands We do not notice their activity while they are present but we recognize their importance by the serious effects which follow their removal The complete removal of both thyroid glands is followed either by acute symptoms of a tetanic type or by chronic states which are known under the names of myxedema and cretinism It is however, a well-established fact that the removal of four-fifths or even five-sixths of both thyroids is not followed by perceptible consequences which means that one-fifth or one-sixth of the entire gland is amply sufficient to provide the body with the indispensable substance contained in the secretion of the gland It was just on that account that, at first, the experimental results showing the importance of this gland were disputed by some observers, small accessory glands were hidden in some cases which made the apparently complete removal of both thyroids, ineffective The thyroid gland possesses accordingly four or five times more tissue than is necessary for the complete maintenance of health and life of the animal

In recent years some of the symptoms following the removal of the thyroid gland, especially the acute manifestations, are ascribed to the simultaneous removal of the epithelial bodies known as parathyroids They are four in number I do not know of a statement dealing directly with the question how much of the parathyroids has to be removed in order to bring out the pathologic effects However, in the dog the parathyroids are imbedded in the thyroids, two in each lobe, and some of the acute symptoms following the removal of the thyroids in dogs are ascribed as stated above, to the simultaneous removal of the parathyroids By the removal of four-fifths of the thyroids, surely two and probably three of the parathyroids are also removed But since the removal of four-fifths of the dog's thyroids is not attended with any evil consequences, we may also conclude that a good deal of the substance of the parathyroids can be dispensed with without any ill effects

For the suprarenal glands it is now well established that their removal is absolutely fatal to the animal Death follows within eight to thirty-six hours after the extirpation of the glands, under conditions of low blood pressure, extreme muscular weakness and exhaustion But the removal has to be complete, if one-tenth of the glands or even less is left in the body, the animal shows no pathologic symptoms Here, again, as in the thyroid, this fact caused the divergence of opinion which sprang up soon after Brown-Séquard made the discovery of the importance of this ductless organ In many of the experiments bits of the tissue of that organ were left behind, besides, many an animal hides somewhere accessory organs of the same type For the adrenals, then, it is evident that the body possesses indispensable tissue at least ten times as much as is necessary for the maintenance of normal life

The brain is built on a bilateral plan In former years, when following the lead of Flourens and as a reaction to the teachings of Gall the brain was considered as a uniform organ, attending only to one function, some facts seemed to demonstrate indeed that there is a great excess of tissue in that organ, since the older experiments of Flourens and newer experiments of Goltz indicated that large parts of the brain could be removed without serious injury to life To-day we know that the brain presents a collection of many organs, of many centers, the injury of each of which is followed by sensory or motor disturbances in definite areas of the body As a whole, the bilateralness of the hemispheres does not mean the same as bilateralness in other organs, namely a duplication of tissue for one and the same function One hemisphere attends to the needs of one side, for instance, the motor areas of the right arm or right leg are located in the cortex of the left hemisphere and those of the le and are located in the right hemisphe of the subcortical centers and a oblongata

To this rule there is, however, an exception, for the motor organs having in charge such muscles or group of muscles which normally contract on both sides simultaneously The motor area of one side can take charge of the muscles of both sides Such is the case with the motor areas of the respiratory muscles, the muscles of the larynx, of deglutition, etc An injury to the motor areas of these muscles in one hemisphere only does not cause paralysis of these muscles An instance well known to practitioners is the one-sided injury to the motor area of the orbicularis palpebrarum The muscle, as a rule, is not paralyzed by such an injury, at least not when the muscles on both sides contract simultaneously As is well known, the absence or presence of paralysis of this muscle in cases of facial paralysis serves as a means to diagnose whether the paralysis is of central or peripheral origin

An example of an uneconomical principle, to use the expression of Verworn we find in the bilateral innervation of certain viscera by the pneumogastric nerves For instance, the normal rhythm of respiration is completely changed when both vagi are cut, whereas when only one vagus is cut, the respiration remains normal Apparently, one vagus nerve is amply sufficient to carry on the regulation of respiration A similar condition obtains with regard to the heart beats For certain animals, the dog, for instance, the vagi carry on an inhibitory tonus When both vagi are cut, the heart beats are considerably increased in frequency, when only one vagus is cut, the rate does not change Here, again, a single vagus nerve is sufficient to carry on that inhibitory tonus Still more striking is the following fact After cutting both vagi, the animal dies within a day or two from aspiration pneumonia, whereas when only one vagus is cut, the animal not only survives the operation, but is for all purposes apparently perfectly normal One vagus nerve, then, is amply sufficient to carry on these functions, but the body is provided with two nerves According to Verworn, this should be an example of a violation of the principle of economy in the animal body and its existence should be denied *a priori*

EXCESS OF TISSUE IN THE UNSYMMETRICAL ORGAN

Further examples of the ample provision of the structures of the body with factors of safety we meet also in the organs of the body which are not built on the bilateral plan, the unsymmetrical organs We shall mention here first the pancreas with respect to its internal secretion It is now common knowledge that the complete removal of the pancreas leads to glycemia and glycosuria But here we note the fact that if a small part of the gland, say not more than one-tenth, is left in the body no ill effects follow such an extirpation One-tenth of that gland is capable of completely protecting the animal against glycosuria, but the body is nevertheless provided with ten times as much

Another striking example is the liver This organ has many important functions It converts the sugar into glycogen, it converts the poisonous ammonia compounds into the comparatively harmless urea It forms bile which carries out poisons from the body, removes waste products assists in some way or another in the absorption of fats, aids in the digestion of proteids and what not more But Ponfick found that the removal of one-half of that organ practically does not interfere with the life of the animal, and the successful removal of even three-fourths of the organ does not produce symptoms indicating that any of its functions are seriously interfered with That organ then is provided with an abundance of active tissue considerably in excess of its normal requirements

Similar striking examples of factors of safety we meet with in the luxurious construction of the gastrointestinal canal The entire stomach or the greatest part of it has been removed in animals and man without interfering with digestion and nutrition Of the small intestines, large parts have been resected without serious consequences In human beings the largest part removed measured, I believe, over 3 meters, and Erlanger and Hewlett have studied the metabolism of dogs seven or eight months after the removal of 70 or 80 per cent of the movable part of the small intestines Three-fourths, then, of the small intestines are almost a luxury to the body We need not perhaps speak of the fact that surgeons have removed large parts of the colon without ill effects From the present attitude of bacteriologists and physiologic chemists toward the activities of the large intestines, one is led to believe that the body might do best without any part of that organ Be this as it may, it is quite sure that the digestive canal is provided with a good deal more structure than is required for the maintenance of its function

Here we shall discuss briefly also the luxurious provision of the alimentary canal with digestive ferments There are two proteolytic ferments, pepsin and trypsin, to which we may add also erepsin, a ferment found by O Cohnheim in the mucous membrane of the small intestines, and which is said to be capable of splitting albumose into amino acids There are two amylolytic ferments, the ptyalin of the salivary glands and the amylopsin of the pancreas As to lipolytic ferments, the steapsin of the pancreas is not the only one of that kind which reaches the contents of the digestive canal Thus several investigators have recently confirmed the statement of Volhard that the fundus of the stomach secretes a lipase which is capable of splitting emulsified fat Lipase is contained also in the liver and in the bile

Now, there are a number of experiments and clinical facts which go to show that digestion can continue in normal fashion, even if one-half or at least a good part of these ferments are eliminated from the digestive tract Older and recent experiments have established the fact that the removal of the salivary glands has no effect on the digestion We know, on the other hand, that after removal of the pancreas, or in cases of isolated destructive diseases of this organ, the digestion of carbohydrates is not disturbed Normally, therefore, there is a superabundance of amylase in the digestive canal As to the proteolytic ferments, we have already mentioned that the complete removal of the stomach does not disturb digestion Furthermore, in cases of achylia gastrica in which the stomach secretes neither hydrochloric acid nor pepsin, the proteid digestion is apparently normal On the other hand, we know that the elimination of the pancreas does not affect palpably the proteid digestion With regard to lipase, clinical pathology was teaching that in cases of disease of the pancreas the stool contained fat, which would seem to indicate that, in the absence of the pancreatic lipase, no other lipolytic ferment was present in sufficient quantity to split completely the ingested fat However, in a very recent study of Umber and Brugsch it was shown that the fat-splitting function is carried on, even in the absence of the pancreas, in a normal way

We are, then, surely justified in claiming that the vari-

ous digestive ferments exist in the alimentary canal in quantities far above the necessities for the digestion of a normal amount of food

THE EXTRAVAGANCE OF NATURE

All the numerous organs and complex tissues which we have just passed in review are built on a plan of great luxury Some organs possess at least twice as much tissue as even a maximum of normal activity would require In other organs, especially in those with an internal secretion, the margin of safety amounts sometimes to ten or fifteen times the amount of the actual need. An extreme degree of superabundance and actual wastefulness we meet with in the organs and functions having charge of the continuation of the species Let us illustrate it by the following few data The ovum exists for the purpose of reproduction Assuming that the sexual function of a woman lasts forty years and assuming, further, that every ten months of these years would be taken up by a pregnancy, then only fifty ova would be required of the ovary But assuming even that a regular menstruation is an essential and indispensable part of the sexual function, then five hundred ova would be the maximum that the function of reproduction could use Nevertheless, we find that the ovary of the new-born female child possesses between 100,000 and 400,000 eggs, and at the time of puberty there are still about 30,000 ova ready to enter on their possible mission That is, the ovary contains at puberty sixty times more ova than the body could possibly ever employ But there is an incomparably greater waste in the provision of the male germ According to Rohde, each ejaculation contains 226,000,000 of spermatozoa Now, we know that of all these legions only one single spermatozoon is required and only one can be used What a marvelous waste of living cells for the sake of assuring the perpetuation of the species But there are some attenuating circumstances With a velocity of only 0 06 of a millimeter per second, with the dangers of crossing the sea of fatal acid vaginal secretions and with a resistance to the onward progress offered by the cilia of uterine epithelium swaying in the opposite direction, not too many of the storming millions stay in the race and have a chance to reach the goal At any rate it is not by economy, but by immense waste of cell life that the chance for continuation of the species is assured

In striking contrast to the extreme luxuriousness of provision of tissue in the organs previously described stands out the comparative scantiness of cell tissue in some organs—if we may call them so—of the central nervous tissue The centers of the medulla oblongata, for instance present such minute bodies that hardly a part of any center could be injured without endangering the entire function Any injury to the respiratory center suspends immediately and permanently the function of respiration The possible existence of some respiratory centers in the spinal cord does not alter the practical result The same applies to the center of deglutition The blood pressure as we shall see later is provided with quite a large number of safety factors However the immediate effect of an injury to the vasomotor center is a dangerous drop in blood pressure the restitutions and compensations over which the mechanism commands are not forthcoming until after a long interval We may point out however that the central nervous system is provided externally with factors of safety against two of its main enemies it is protected by a bony enclosement against any physical injury and especially is the medulla oblongata well hidden away, and it is protected by an abundance of blood vessels against dangers of anemia

Following the old divisions of the organs of animal life into reproductive, vegetative and animal systems, we may say, perhaps, that the reproductive system is provided most and the animal system is provided least with factors of safety, while in the vegetative system, which in that regard occupies a middle position, those organs which seem to be less well differentiated like the organs for internal secretion, seem to be provided with a larger surplus of tissue

FACTORS OF SAFETY IN THE CIRCULATORY APPARATUS

The complex apparatus of circulation is well provided with factors of safety In the first place, the animal body possesses a good deal more blood than it requires for its work It is known by experimental evidence and clinical observations that nearly one-half of the blood can be withdrawn without serious consequences to the life of the animal As a further factor of safety in this regard we might register the ability of the blood to recover its loss very rapidly

Furthermore, the capacity of the entire system of blood vessels in a completely relaxed state is again much greater than the volume of blood of the body It is this difference between the volume of blood and the volume of the vessels which greatly facilitates the circulation of the blood and the proper nutrition of the various organs of the body On the basis of this difference large quantities of blood can be thrown at once and with ease into the splanchnic region, into the skin or into the working muscles After a local injury or infection in a very brief time for the sake of repair or defense hyperemia sets in, and vessels which were not noticeable before become fairly visible An instance of a similar order is the widespread institution of collateral circulation Around an anemic focus blood vessels which previously were hardly visible become full and large to meet the threatening danger of necrosis of the neighboring anemic tissues All these devices which spring into activity only under special exigencies are manifestly factors of safety and are made possible by superabundance of blood vessels

The difference between blood volume and capacity of vessels is an indispensable factor of the circulation, and its permanence is assured by many devices Thus, for instance, any artificial increase of the volume of blood is immediately corrected through the chief eliminating organs, or through the secretory glands, or even by throwing some of the surplus serous fluid temporarily into the lymph spaces and serous cavities Œdema, ascites and hydrothorax are sometimes not parts of the affliction, but means of repair

Furthermore, existence of the difference between vascular capacity and quantity of blood is made possible only by a wonderful mechanism which controls in every part of the body the mutual adaptation of blood and vessel—the so-called vasomotor apparatus It causes the dilatation of the vessels in the part of the body which requires and is to receive more blood at the same time causing a constriction of the vessels in a part which can spare some of its blood This mechanism is so important that it is again guarded by an abundance of factors to assure its safety There is a vasomotor center in the medulla oblongata, when this is destroyed a number of vasomotor centers in the dorsal medulla can when they are eliminated the sympat over the command and when they

vascular wall itself attends to the proper regulation and adaptation of the capacity of the vessels to the volume of blood

Finally, the chief motor mechanism of the circulation, the heart, is a clear instance of an organ provided with a superabundance of volume and force Normally it is in a state of tonus and receives only a moderate volume of blood which it throws into the aorta with no great hurry and with an expenditure of only a moderate amount of energy But at any moment it is ready to receive many times the usual volume of blood, is ready to double or treble the rate of its beats and is capable of developing nearly any amount of energy which the situation might require of it It is a wonderful, prompt, adaptive motor mechanism with a good reserve of force

We have, then, in the circulatory system many instances of provisions with factors of safety to assure the nutrition of all parts of the body in all states and conditions An abundance of blood, a superabundance of blood vessels, a vast provision of factors for the safety of the adaptation of the two to one another and a great reserve of motor force for transportation and distribution of the blood

The multiple mechanisms existing for the care of the vasomotor apparatus lead us to the following considerations The internal motor organs of the body, like the gastrointestinal canal, the heart, the uterus, etc, are provided with central motor innervations as well as with local motor mechanisms In all cases it has been shown that the movements of the organs continue also after the severance of the connections with the central nervous system Thus the heart continues beating after section of both vagus and accelerator nerves, the peristalsis of stomach and intestines continues after cutting the vagi and the splanchnics, and pregnancy and delivery take a normal course after complete destruction of the spinal cord

On the basis of these facts it is now generally assumed that the extrinsic innervations of these organs have only a regulating function, while the real motor function is invested in peripheral devices, be they of neurogenic or of myogenic character This conclusion is obviously based on the supposition that the function of an organ is carried on only by a single mechanism Hence the fact that the motor work is carried on after eliminating the extrinsic nerves seems to be sufficient evidence that they can not form an integral part of the motor function

These conclusions are fallacious There are an abundance of instances in which one and the same function is cared for by more than one mechanism But we need only refer to the vasomotor apparatus It was known before and it has been very recently conclusively demonstrated again by Magnus, that after eliminating the influences of the sympathetic and the central nervous system the blood pressure is well taken care of by the peripheral mechanism of the walls of the blood vessels Nevertheless, nobody doubts that the vasomotor centers are integral parts of the vasomotor mechanism Why this difference of views for the different organs of the body?

The subject is evidently an important one, but we shall not enter into a further discussion of it The remarks were made to illustrate the importance of the conception that in the animal body one function is not infrequently cared for by more than one mechanism It is capable of profoundly affecting the views on many vital biologic problems

DUPLICATION OF MECHANISMS AND ORGANS

We shall cite a few more instances in which two or more parallel mechanisms exist for the accomplishment of one function I may be permitted to mention in the first place the function of deglutition As was shown by us about twenty-five years ago, fluids and semifluids are squirted down from the mouth to the cardia by the force of the contraction of the mylohyoid muscles, but they can also be carried down by the peristalsis of the esophagus Of the latter there are again, as I have recently shown, two kinds a primary peristalsis which runs independently of the integrity of the esophagus and a secondary peristalsis which is closely connected with the integrity of the tube and which is more resistant to certain detrimental influences It will probably be shown before long that the esophageal wall alone is also capable of contributing to the function of carrying the food down to the stomach

The functions of the pancreatic secretion seem to be an instance in which mechanisms of a different type are sharing in its management It has long been established that the pancreatic secretion stands under the influence of the central nervous system Recently it was discovered by Bayliss and Starling that an intravenous injection of secretin causes a considerable increase of pancreatic secretion Secretin is an extract made of the duodenal mucosa with an addition of hydrochloric acid It is assumed that this substance is produced normally when the acid chyme comes in contact with the mucosa of the duodenum, and that by its absorption into the circulation it is one of the normal causes of pancreatic secretion Now, the effect of the secretin seems to have nothing to do with the nervous system, since the injection is active even after all connections with the nervous system are destroyed On the other hand, in cases of achylia gastrica, in which the stomach is devoid of all secretion, the pancreatic secretion is apparently normal, as the digestion of proteids remains undisturbed But since in these cases there is no secretion of hydrochloric acid, secretin ought to be absent, here the pancreatic secretion is probably attended to properly by the other partner in the management of the function, that is, by the central nervous system

A double management of partners of a different type exists probably also for the mammary secretion There is sufficient evidence that the secretion of milk is under the influence of the nervous system Nevertheless, the secretion continues after all nerves going to the mammary gland are cut The milk secretion in the latter case is probably kept up by a stimulation through an internal secretion provided by the reproductive organs Internal secretion is probably a co-existing factor in many functions of the body

Furthermore, there are instances in which one function is cared for by two separate organs The function of digestion of proteids in the alimentary canal is carried on by two separate organs with a different chemical activity the pancreas and the stomach The trypsin of the pancreas digests proteids in an alkaline medium, while the pepsin of the stomach is active only in an acid medium

An arrangement of a similar character we meet with in the organization of the function of the defense of the body carried on by the white cells against foreign invaders This cellular army of defense is made up of two types the microphages, the polynuclear leucocytes whose abode is in the bone marrow, and the macrophages the

large mononuclear cells which have their barracks in the lymph nodes and lymphoid tissue According to Opie, one of the effectual weapons of these warriors is their intracellular proteolytic ferments But the ferment of the microphage is active in an alkaline medium, while that of the macrophage requires for its activity an acid medium

As factors of safety we may consider also the assistance which one organ lends to another or the vicariation of one organ for another For instance, the assistance which the sweat glands render to the kidney in the process of elimination of a surplus of water, or the vicariation of the mucous membrane of the intestinal canal in the process of elimination of urea Such mutual assistance of the organs is a widespread institution in the animal body and assures the safety of many vital functions

MODE OF DISTRIBUTION OF THE ACTIVITY AMONG THE TISSUES

Returning to the organs which are provided with a large surplus of active tissue, the question confronts us Which is the mode of distribution of the normal activity of an organ among its luxurious tissues? Since the activity of such organs, as we have seen, is far below the capacity of their tissues, the distribution could occur only in two ways Either some part of the tissues work to their full capacity, while the other parts remain idle, being only in readiness for emergencies—like the unemployed vice-president of some organization—or all elements of the organ take equal part in the work, each tissue-element employing only a fraction of its capacity for work. The last alternative is probably the more frequent mode of distribution There are, for instance, probably no totally inactive glomeruli and tubules in the kidneys, no inactive liver cells, no thyroid epithelial cells entirely without colloidal substance, but the epithelium of the glomeruli and tubules work only one-half of their capacity, the islands of Langerhans work less than one-tenth, the vesicles of the thyroid about one-sixth of their capacity, etc For the muscles of the heart it is generally assumed that all the fibers take part in every contraction, but that they work normally only a fraction of their capacity On the other hand, there are organs in which surely parts of the tissue do not take active share in the work, unless called on under special circumstances In the ovaries, for instance, surely only one ovum becomes fertilized, while all the others are only on the waiting list An instructive instance is the mode of distribution of work among the respiratory muscles In normal inspirations, for instance, we find only the diaphragm alone at work When somewhat deeper breathing is required, the inspirations are supported by the levatores costarum and the scaleni Furthermore, in labored respirations also the sternohyoid and the posterior superior serrati become engaged in the work, and when the difficulties become still greater still other groups of muscles enter into the struggle In other words the different groups of muscles which are designated to do the work of inspiration are not engaged in it in the manner of partners of equal standing, but enter on their duties as a series of vice-presidents, or, rather as a series of reserve forces On the other hand, in the diaphragm probably all the muscle fibers are engaged in the work of each inspiration at all times employing only a fraction of their capacity in normal or shallow inspiration and working to their utmost capacity in dyspnea or asphyxia We see, therefore, in one and the same function both modes of distribution of work well represented one muscle steadily at work with all fibers, like a heart adapting the degrees of their energies to the various requirements of their work, and a number of groups of other muscles, acting as graded reserve forces, idle but ready for emergencies—instructive examples of luxurious factors of safety

In the foregoing we have brought forward a sufficient number of instances in which various parts of the living organism are provided with a superabundance of material and energy to warrant the comparison of the organism with a machine with regard to the provision with factors of safety

FACTORS OF SAFETY FOR THE FACTORS OF SAFETY

One of the fundamental differences between living organisms and human-made machines is that the former carries in it the germ for self-propagation, while machines have to be made by human hands As a further difference between the two constructions we may perhaps consider the phenomenon of the self-repair Possibly the phenomenon of self-repair in the organism is closely allied with the phenomenon of self-propagation The same source which provides the organism with a mechanism for a reproduction of the entire body provides its parts with a mechanism for regeneration of these parts Reproduction and regeneration might have a common cause At any rate, self-repair distinguishes the organism from the machine If parts of a machine yield to stress and the factors of safety become exhausted, the machine would surely break down, unless it is repaired by human hands, just as it is made by human hands As far as I know, no machine has yet been invented which is provided with devices for a continual self-repair In the living organism self-repair is a widespread function of living tissues and organs It is a dormant force, a reserve force, which springs into immediate activity as soon as any injury is inflicted It is a factor of safety peculiar to the living organism It manifests itself in the forms of regeneration and hypertrophy of tissues and organs, and also in the functional forms of inflammatory reaction, of substitution vicariation and adaptation And here it is interesting to observe that self-repair does not set in only when the margin of safety is exhausted, when there is an actual need for repair, but already when only the integrity of the factors of safety is encroached on Self-repair is a factor of safety also for the protection of the factors of safety When, for instance, one kidney is removed, the hypertrophy of the secreting elements begins a few hours later, although the urinary secretion was hardly impaired It is an attempt to reprovide with luxurious tissue The liver cells regenerate, the thyroid the adrenals and other organs hypertrophy and regenerate even when the preceding injury was not extensive enough to affect the function of these organs It is as stated before, an attempt to restore the factors of safety A heart working above normal becomes hypertrophied even if it has not yet met with any obstacles, it is a provision in time against possible shortcomings, it is a repair of the factors of safety This is a very interesting field, but it would lead us too far to enter on a detailed discussion of the various aspects of the subject

TWO EXCEPTIONS

We would only call attention to two exceptions One is the very scanty repair which takes place in the organs of reproduction But the influence [illegible] that the organs may safely forego self-

repair The other exception concerns the nerve ganglia, nerve cells, as a whole, do not regenerate We have learned above that the ganglionic masses of the central nervous system are scantily provided with factors of safety Here we learn that they are also deprived of the great aid afforded by regeneration There is some functional self-repair in the central nervous system Other centers assume the work of the lost ones, adjacent tissues become educated to the work, dormant centers of the opposite hemispheres awake gradually to their new missions But all these substitutes are insufficient satisfactorily to replace the lost function, not to speak of a provision for factors of safety

Here we must recall that the lack of regeneration applies only to the nerve cells The nerve fibers, on the other hand, especially those of the peripheral nerves, show rather a very active regeneration

The foregoing review shows, I believe, conclusively, that the tissues and organs of the living animal organism *are abundantly provided with factors of safety* The active tissues of most of the organs exceed greatly what is needed for the normal function of these organs In some organs the surplus amounts to five, ten or even fifteen times the quantity representing the actual requirement. In the organs of reproduction the superabundance and waste of tissue for the sake of assuring the success of the function is marvelous Furthermore, the potential energies with which some organs, like the heart, diaphragm, etc, are endowed are very abundant and exceed by far the needs for the activities of normal life The mechanisms of many functions are doubled and trebled to insure the prompt working of the function In many cases the function of one organ is assured by the ready assistance offered by other organs The continuance of the factors of safety is again protected by the mechanisms of self-repair peculiar to the living organism We may, then, safely state that the structural provisions of the living organism are not built on the principle of economy On the contrary, the superabundance of tissues and mechanisms indicates clearly that safety is the goal of the animal organism We may safely state that the living animal organism is provided in its structures with factors of safety at least as abundantly as any human-made machine

ECONOMY OF EXPENDITURE AS A FACTOR OF SAFETY

The safety of a mechanism is increased, as we have stated before, also by an economic handling of the expenditure of its energy The expenditure of energy by the living animal organism consists chiefly in the work which it performs, that is, the contraction of the muscles Of the involuntary work of the body it is only the action of the heart and the respiratory muscles of which we possess a knowledge of some available facts The heart, although capable of doing a great amount of work, is normally kept down to perform only the most indispensable duty The inhibitory tonus exercised by the vagi prevents the heart from beating too rapidly and too strongly when it is not required, and the vascular reflexes carried from the heart or aorta to the vasomotor centers regulate the vascular circulation so as not to offer too much resistance on the one hand and not to fill up the heart with too much blood on the other hand

The respiration is normally carried out only by one muscle, the diaphragm, and this works only with a fraction of its capacity, the distension of the lungs producing an inhibitory stimulus preventing the muscle from overaction

The contractions of the skeletal muscles being regulated chiefly by the will offer insufficient opportunities for a study of the normal regulation of expenditure of energy emanating from this source There are, however, two facts which are instructive and deserve to be mentioned One is the provision of the muscle with the sense of fatigue setting in with overexertion, it might serve as a guard against overwork, against exhaustion of the muscles The second fact is the provision of the muscular innervation with inhibitory impulses for antagonistic muscles, it prevents harmful or even only unnecessary contractions In other words, it prevents the muscles from an unnecessary expenditure of energy While the facts are not many, they are sufficient to indicate the tendency of the organism to be economical in its expenditure of energy

FACTORS OF SAFETY IN THE SUPPLY OF ENERGY

We now arrive at the examination of the principles *governing the supply of the organism with energy* A machine is provided with fuel far above the necessity for the performance of the expected minimum work, it has to be in readiness for unforseen exigencies How about the organism? The supplies for the animal machine consist of inorganic salts, water, oxygen and food. Our knowledge of the laws governing the supply and expenditure of water and inorganic salts for the animal organism are still too imperfect to be utilized here for the elucidation of our problem We have to restrict our discussion to the supply of food and oxygen The supply of food is influenced so much by the will of the animal that it is difficult to obtain facts permitting only one interpretation For instance, the amounts of food taken by men in all parts of the world can not be taken as the normal quantity which the body requires, because, as Chittenden and his school say, this amount is dictated by habit and not by actual necessity The latter found, as stated before, that with a proteid diet lower than the one employed in the current diet of man, a number of men continued their normal life without special incidents As a result of this observation these investigators assume that the minimum proteid diet is the normal one and advocate its adoption as a standard diet

The finding that men can continue to live with a certain minimum is a fact, the assumption that this minimum is the actual requirement of the organism is, however, only a theory, and a theory which decides that, in contrast to a human-made machine, the animal machine should be provided with a minimum supply of energy just sufficient for the average daily incidents and daily work Neither can we, on the other hand, look on the facts which we have brought together as an absolute proof that the animal's supply of energy ought also to be provided on the same plan of superabundance It may be claimed that the animal's welfare is best cared for by observing stringent economy in the supply of its energy

SURPLUS OF OXYGEN

Luckily, however, the supply of oxygen to the organism is a process practically entirely independent of the will, and, therefore, a fact or two which we find here may well throw some light on our problem One fact here is, indeed, instructive It is a frequently made and well-established observation that the oxygen of the inspired air may be reduced to about one-half of its normal amount without causing any ill effects whatsoever The oxygen of the atmospheric air amounts to about 21 per cent, and it may safely be reduced to about 11 per cent

or 10 per cent Nature, then, supplies oxygen to the animal body in an abundance, amounting at least to twice the maximum quantity which the normal condition of life may require

Furthermore, even with an atmosphere greatly reduced in oxygen, the body is capable of attending to work so strenuous that it may cause a consumption of oxygen perhaps five times the amount normally used up during rest or light work This occurs, as was demonstrated in the interesting experiments of Zuntz and his co-laborers in climbing mountains and carrying at the same time considerable loads at altitudes with a barometric pressure of less than 500 millimeters of mercury We should also remember another instructive and characteristic fact, namely, that the venous blood is comparatively still rich in oxygen, possessing often nearly two-thirds of that present in the arterial blood, which means that the oxygen carried in the arterial and capillary blood is greatly in excess of the requirements of the cellular tissues

Finally, another interesting point is that labored breathing sets in long before the tissues are in actual need of oxygen Dyspneic breathing is a device to cause a refilling of the exhausted surplus of oxygen by a more efficient pulmonary ventilation The hard working skeletal muscles which consume an undue amount of oxygen produce at the same time a substance which stimulates the respiratory center to greater activity and thus to a more liberal provision of oxygen This is, again, a sort of self-repair of the loss to the factors of safety All this is sufficient evidence that, as far as the oxygen is concerned, the supply of the body with energy is certainly not conducted on the principle of stringent economy On the contrary, abundance is the guiding rule here, as it is in the provisions of the body's structures

We now again return to the question of supply of food The presence of an abundant supply of glycogen and fat in all animal bodies seems to me to be a sufficient indication that carbohydrates and fats are not supplied on the principle of stringent economy Fuel material is here abundantly stored up, not so much for its immediate use, but essentially for use in unforeseen exigencies As far as I know the claim has not yet been raised that these savings deposits are due only to acquired habits of ingesting too much of the mentioned forms of food.

With regard to the proteid diet, however, the question of the normal supply, as we have repeatedly mentioned, is not above discussion In a recent review of the subject by Benedict one of his precise statements reads "Dietary studies all over the world show that in communities where productive power, enterprise and civilization are at their highest man has instinctively and independently selected liberal rather than small quantities of protein" Chittenden, on the other hand, says "All our (experimental) observations agree in showing that it is quite possible to reduce with safety the extent of proteid catabolism to one-third or one-half that generally considered essential to life and health" And then adds "It is obvious that the smallest amount of food that will serve to maintain bodily and mental vigor is the ideal" As valuable as the facts which Chittenden and his co-laborers found may be they do not make obvious their theory that the minimum supply is the optimum—the ideal The bodily health and vigor which people with one kidney still enjoy does not make the possession of only one kidney an ideal condition The finding that the accepted standard of proteid diet can be reduced to one-half can be compared with the finding that the inspired oxygen can be reduced to one-half without affecting the health and comfort of the individual But nobody deduces from the latter fact that the breathing of air so rarified would be the ideal Chittenden suggests that a greater use of proteid might be the cause of many ills, for instance, of gout and even of tuberculosis and cancer I shall not attempt to discuss the merits of this theory as far as the causation of tuberculosis and cancer is concerned As to the causation of gout, one of Chittenden's most able supporters, Otto Folin, has pointed out that at best, this could be claimed only for eating crude meat, but not for an ingestion of protein in general, because the latter becomes converted into harmless urea as Folin says I would add that if we should avoid eating meat because some of us might sometimes get gout we should surely avoid eating carbohydrates because it sometimes leads to diabetes, and avoid eating fats because it often leads to various mischiefs What, then, shall we eat with absolute impunity?

But I wish to recall here one fact, namely, that the administration of too large a dose of thyroid extract leads to a pathologic condition similar in character to that of Graves' disease The normal body, nevertheless, possesses, as we have shown above, a great surplus of thyroid tissue without causing any thyroidism That some isolated metabolic product might do some harm when artificially incorporated into an animal is far from being fair evidence that this normal product of the animal mechanism does harm there when in its normal connections Metabolic products are present in great abundance in all healthy individuals without causing mischief

STORAGE OF PROTEID

The situation seems to me to be this All organs of the body are built on the plan of superabundance of structures and energy Of the supplies of energy to the animal we see that oxygen is luxuriously supplied The supply of carbohydrates and fats is apparently large enough to keep up a steady luxurious surplus For the supply of proteid we find in the actual conditions of life that man and beast, if they can afford, provide themselves with quantities which physiologic chemists call liberal This may or may not be the quantity of which Nature requires and approves Experiments have shown that a number of men subsisted on half of such quantities This latter might be an indispensable minimum, just as there is an indispensable minimum for all other luxuriously endowed provisions of the animal organism and the liberal ingestion of proteid might be another instance of the principle of abundance ruling the structures and energies of the animal body There is, however, a theory that in just this single instance the minimum is meant by Nature to be also the optimum But it is a theory for the support of which there is not a single fact On the contrary, some facts seem to indicate that Nature meant differently Such facts are, for instance, the abundance of proteolytic enzymes in the digestive canal and the great capacity of the canal for absorption of proteids Such luxurious provision for digestion and absorption of proteids is fair evidence that Nature expects the organism to make liberal use of them Then there is a fact that proteid material is stored away for use in emergencies, just as carbohydrates and fats are stored away In starvation nitrogenous products continue to be eliminated in the urine which according to Folin, are derived from exogenous sources that is, from ingested proteid and not from broken-down organ tissues An interesting example of storing away

of proteid for future use is seen in the muscles of the salmon before they leave the sea for the river to spawn According to Mescher the muscles are then large and the reproductive organs are small In the river, where the animals have to starve, the reproductive organs become large, while the muscles waste away Here, in time of affluence, the muscles store up nutritive material for the purpose of maintaining the life of the animal during starvation and of assisting in the function of reproduction This instance seems to me to be quite a good illustration of the rôle which the factor of safety plays also in the function of the supply of the body with proteid food The storing away of proteid, like the storing away of glycogen and fat, for use in expected and unexpected exceptional conditions is exactly like the superabundance of tissue in an organ of an animal or like an extra beam in the support of a building or a bridge—a factor of safety

I, therefore, believe that with regard to the function of supply of tissue and energy by means of proteid food Nature meant it should be governed by the same principle of affluence which governs the entire construction of the animal for the safety of its life and the perpetuation of its species

Before concluding I wish to add the following remark It seems to me that the factors of safety have an important place in the process of natural selection Those species which are provided with an abundance of useful structure and energy and are prepared to meet many emergencies are best fitted to survive in the struggle for existence

Rockefeller Institute for Medical Research

Original Articles

CLINICAL PHYSIOPATHOLOGY

THE NEED OF A NEW CLASSIFICATION OF DISEASES OF THE NERVOUS SYSTEM *

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One who meets large numbers of undergraduates in the class room and general practitioners in consultation is often confronted with the assertion that neurology is the hardest, or at least one of the hardest, branches of scientific medicine to comprehend

Some genuine difficulties must be present in order to account for the prevalence of such an opinion It would be absurd to assume that so many intelligent men can not grasp what to others of no greater mental capacity seems so easy of comprehension and so self-evident

The view has been expressed, and in my judgment rightly so, that for preciseness, reasonableness and scientific accuracy the teachings and findings of modern neurology give this department of medicine a rank second only to that of ophthalmology If this view be but approximately correct, then it would seem that many intelligent men are not as capable as they appear to be, or else they are being handicapped by some previously acquired prejudice, erroneous conceptions or false deductions The latter, I am sure, is the true explanation The source of the whole trouble, I believe, may be uncovered by saying that the two classes of men, the pessimistic and the optimistic, are regarding the nervous system, both in health and in disease, from quite different standpoints, and that these different standpoints are respectively the anatomic and the physiologic

I THE ANATOMIC CONCEPTION OF DISEASE.

As a pure science, anatomy for centuries has been laying a splendid foundation for the beginning of the study of disease and for the elaboration of surgical and other mechanical means of treatment Except some scattered observations of a few microscopists prior to Virchow's time, little of value was known of the minute structure of the human frame There was no real pathology except along coarse and crude lines The classification of diseases and their nosology were based wholly on symptomatic manifestations and, as is the case largely with psychiatry to-day, the morbid entities known to general medicine were nothing more than groups of symptoms

Ere long improved microscopes and microscopic technic widened the confines of histologic knowledge The structure of the organized tissues became better known until finally the great cellular doctrine was promulgated and Virchow's own epoch-making labors culminated in "The Anatomic Principle in the Study of Disease" This address, now one of the treasured classics of medical literature, summed up so practical and so far reaching a scientific generalization which was apparently so well based on established data that disease as portrayed in it was identified almost solely with change of anatomic structure A tremendous impetus had been given by the cellular doctrine to morphologic and pathologic study Brilliant discoveries had been made and some marvelously happy correlations had been established between long-recognized clinical phenomena and postmortem findings This together with the fact that the teachings of the cellular doctrine and all that rests on that doctrine were easy of comprehension and flattered that human weakness whereby men are led to accept what is perceived by their senses as true and what is not so perceived as doubtful or not true, accounts for the ready and continued popularity of this anatomic conception of disease Clinical medicine, especially surgery, is dominated by it to-day It stands as the evidence of a tremendous advance on the old symptomatic conception, and it has placed Virchow's name among those of the world's master minds

During the last few years, however, a change has been going on in clinical and academic medicine, steadily and positively, yet so silently and insidiously that many who do not recognize it are confused and discouraged Just as Virchow saw the untenability of the older anatomic conceptions and mere symptomatic classifications of disease before his day, many clinicians and pathologists are now beginning to recognize the inadequacy of morphologic changes and structural deviations to account for the multifarious symptoms of practical medicine Something more than an anatomic conception of disease is needed, and hence was see the older science of anatomy reluctantly, though surely, yielding to her younger sister, physiology the guiding strings in the ultimate solution of the problems of disease

* Read in the Section on Nervous and Mental Diseases of the American Medical Association at the Fifty seventh Annual Session June 1906

II THE PHYSIOLOGIC CONCEPTION OF DISEASE

Practical medicine has to do with living, functionating beings, whereas structural pathology investigates and draws its deductions from postmortem, non-living or at least highly altered tissues Whether the disease process or the laboratory manipulation be the responsible agent, it is none the less true that the tissues which the pathologist investigates are not the same tissues which constituted a part of the living, though sick, man It is the absence of the physiologic factor and all that it includes which differentiates the tissue under the microscope from the same tissue when a part of the living organism For this reason, so obvious that one is amazed physiology has been thus long in assuming its rightful rôle in relation to clinical medicine, the anatomic conception alone of morbidity must always prove inadequate Happily, scientific medicine has at last awakened to the realization of this truth, and on every hand evidences are beginning to appear that physiology, including physiologic anatomy, is being recognized as the proper guide in the interpretation of morbid phenomena Pneumonia is no longer regarded as a disease merely of lung tissue Typhoid fever is something more extensive than the ulceration of Peyer's patches The rheumatic group of troubles are not alone confined to joint and muscular inflammations Cardiac manifestations do not always depend on cardiac lesions These and many other familiar examples demonstrate plainly how disturbed physiologic functions brought about by toxic blood states and ruptured harmony of action between the various parts of the entire organism, are of more importance than mere anatomic findings Indeed, in connection with many diseases in which hitherto we had supposed that the structural changes observed after death were adequate to explain the whole process, we are beginning to question whether those structural changes are not to be classed rather as mere secondary, unimportant by-products At all events, abnormal physiology is becoming more and more the interpreter of clinical manifestations, while the mere anatomic findings are being given a less prominent position than heretofore Structural pathology is slowly but surely yielding first place to physiologic pathology

As the physiologic conception of disease becomes more widely recognized the time-honored, interminable debate about the significance of the terms organic and functional as applied to specific affections will die out, for as Cowles rightly says, "In general medicine this distinction of organic and functional disease appears to be an expression of the dominance of morphologic conceptions in medical knowledge" All disease is functional, must necessarily be so, because disease is something that occurs in living, functionating beings, and not in dead functionless tissues But function is an attribute of matter, and, therefore, function and matter being bound up in unison, the only question at stake is that of the precedence in time and causation of the function and the alteration of the tissues This is a futile question for debate, it seems to me, and yet it has divided the medical world into two opposing camps, the one holding that all disease in its last analysis is synonymous with change of structure with consequent disturbance of function, while the other equally maintains that all disease results primarily from disturbance of function with consequent alteration of tissue Heretofore the former view has dominated and still largely dominates in medicine but the latter view is pushing itself at present well to the forefront It is to be hoped that the upholders of the latter view will not, as too many enthusiasts are doing, advocate it to the absurd extent of entirely ignoring the former Structure and function are interdependent, just as physiology and anatomy are, but, as physiology is interested only in living anatomy, so function is concerned only with living structures In a word, as in the study of the normal living man, we follow physiologic lines, so in the study of diseased man we must follow the lines of his diseased functions Therefore, clinical medicine has to do always and only with functional diseases, using the adjective here in the larger sense applicable to all diseases

Let structural pathology furnish all the information it can as to the appearances of the tissues during and after the disease process, but in practical scientific medicine it must be remembered that the abnormal physiology, the disturbed functions, and the reasons thereof, are the desired goal of study This is the physiologic conception of disease, and, while not wholly opposed to the anatomic, on which it, of course, in part rests, it is a higher and more accurate conception than the latter It recognizes disease as a phenomenon of life and not as a mere postmortem exhibit

III PHYSIOLOGIC CONCEPTION OF DISEASE SLOW OF ACCEPTANCE

That disease is an abnormal physiologic process, and not a mere morphologic change, is not a new idea by any means, and yet there is very little evidence of its frank acceptance by the rank and file of the profession, the teachers, and the writers of medical text-books Though himself the great exponent of pathologic anatomy, Virchow was ever ready to present as one of his favorite themes "the establishment of pathologic physiology which, to his mind, was the foundation of scientific medicine, and, therefore, of medicine as a whole" The living, functional activity of the tissues, whether those tissues be contemplated as body, organ or cell, is the object of medical research, both in health and in disease The intimate study of the physical structure of these tissues naturally forms the groundwork whereon to begin the physiologic research, but one who limits his study of disease to the investigation of this mere groundwork rests at the bottom rung of the ladder and may even be led astray in his further deductions As Claude Bernard long ago well said, "There exists only one science in medicine, and that science is physiology applied to the state of health as well as to the state of disease"

The physiologic method being obviously the one to be adopted in the study of the living, functionating organism, it sounds almost platitudinous in Lepine to say, "It is superannuated to think along anatomic lines nowadays" and in Huchard to insist that "in clinical work hereafter it will be necessary for one to think and act along purely physiologic lines" Robin voiced the same sentiment when he urged first and foremost always the study of the "disease of function"

Though the very definition of pathology is "the totality of the morbid conditions and processes in a disease" there is a remarkable absence of the teaching of these processes both in medical text-books and in medical educational institutions Normal physiology and structural pathology are presented in great detail, and both special chairs and laboratories are established for the [illegible] elucidation Only one school to [illegible] dge [illegible] today pathologic physiology is [illegible] ran [illegible] cine, and that school the [illegible] s [illegible] laboratory open only for th [illegible] on

other schools the student takes up normal physiology as a special part of the curriculum, whereas abnormal physiology must needs be picked up in a fragmentary way from the lectures on general medicine The study of clinical medicine and surgery is begun with a fairly complete idea of normal structure, normal function and even diseased structure, but with practically no idea of diseased or abnormal function The student learns everything but that which he finds transcending everything else in importance when he gets into active practice, namely, how diseased human beings continue to live and perform their functions And when as a practitioner he endeavors to supply this hiatus in his knowledge by a close study of medical literature he will, as Professor Hall[1] says in his recent address, "search the chapters of general pathology in vain for any sections that deal adequately with the problem of the physiology of disease" The only work on general medicine that attempts to correlate frankly physiology and pathology and to apply to clinical medicine the principles of pathologic physiology is Krehl's well-known "Pathologische Physiologie," of which an English translation has been recently made by Dr Hewlett of the Johns Hopkins University For neurology Grasset has done the same thing in his "Les Centres Nerveux Physiopathologie Clinique," published only last year And in my own work issued over a year ago a similar trend of thought was adopted in the classification and presentation of the diseases of the nervous system In connection with the mention of literature devoted to the consideration of the physiologic conception of disease, commendation should be made of the papers of Putnam[2] and of Cowles,[3] two of the most logical, scientific and philosophic essays that have appeared in recent years The work of Dana, Putnam, Prince, Herter, Chittenden, Barker, Cowles and others on this side of the Atlantic, and of Jackson, Mott, Halliburton, Ziehen, Campbell and many others in Europe is strong corroboration of the steady trend of modern thought in advanced scientific circles in the direction of physiologic medicine. As we have seen it is the only true and scientific method for the investigation of disease, we are all the more surprised at the relatively inadequate way in which it is taken up and presented by the teaching bodies and the general profession.

IV THE PHYSIOLOGIC CONCEPTION OF DISEASE IN NEUROLOGY

I think I am well within the bounds of truth when I say that the physiologic principle in the interpretation of disease and its symptomatology is more glaringly manifested in neurology than in any other department of medicine It is largely for this reason that neurology seems so hard and confusing to many practitioners whose training in pathology and whose thinking in diagnosis have been along purely anatomic and morphologic lines In 1901, using the anatomic conception of the spinal cord by way of illustration, I wrote [4]

> The spinal cord, as it is usually taught anatomically, is a more or less independent organ made up of certain columns of white matter, and certain central masses of gray To these columns are attributed particular functions and assigned particular names and boundaries Arbitrary divisions and subdivisions are laid, as, for instance, between the so called anterior and lateral root zones, fissures are described where there are no fissures, and mere disconnected, short, associative tracts are dignified with the name of column As a result of all this, the cord, in its entirety assumes, in a hazy way in the mind of the student, the characteristics of an individual, distinct organ, attached somehow at one end to the brain, and giving off and receiving along its sides motor and sensory nerve roots When the student comes to study minutely the physiology of this organ, he is amazed to find that he has to learn its structure from an entirely different standpoint and that its physiologic dissection seems to nullify many of the arbitrary divisions and arrangements made in it by anatomy He discovers that it is far from being a distinct organ, separate from and subordinate to the brain, but that both it and the brain, together with the peripheral nerves make up a composite organ whose parts overlap and run into each other in a most marvelous complexity of structure and function He is surprised to learn that the term column is as applicable to the cellular gray matter as it is to the fibrous white matter, being, in fact, a poor term to be applied to either He is not a little confused when he observes that the nerves are not given off and received by the cord, but that certain efferent processes are sent forth from its central ganglionic masses to terminate in the muscles, while the sensory processes from certain peripheral cells are merely received into it to arborize around its own cells A series of ganglia with their appropriate efferent processes, in and about which terminate certain afferent processes from without, constitute the cerebrospinal organ in the truest sense of the word The peripheral neurons and the central neurons find merely a meeting place in the ganglionic gray matter surrounding the central canal, including the ventricles of the brain and the central canal of the cord.

The same thought was clearly in the mind of Grasset when he wrote [5]

> For each function, simple and complex, there corresponds a special nervous apparatus Each of these apparatuses extends through all of the neuronic levels, continues throughout all planes of section of the nervous system, has its own peripheral neurons, its neurons of relay, and its cortical neurons Each one has at one and the same time centripetal fibers, centers and centrifugal fibers The visual apparatus for instance, comprehends motor nerves that are indispensable for vision, just as the general motor apparatus would be powerless to act without its kinesthetic nerves And thus vanishes the division of the nervous system into cerebrum, medulla oblongata, spinal cord, which division has nothing but a mere geographical value Furthermore, there is not even a geographical unity in the nervous system, nor a unity in the direction of the nervous current, the system of neurons, arranged in these various apparatuses possesses unity only in its function, and that is a physiologic unity

Obvious as it is that the new anatomy of the nervous system is a physiologic anatomy, and consequently that a proper conception of neuropathology rests on a physiologic rather than on a mere anatomic basis, on goes the student and practitioner trying to learn what are the diseases of the brain and their particular symptoms, what of the medulla, of the cerebellum, of the spinal cord, of the peripheral nerves, etc Is it any wonder that confusion overwhelms him, and in the end he exclaims against the almost insuperable difficulties in the understanding of neurology? His difficulties will continue to grow until he awakens fully to the fact that scientific neurology nowadays follows the guiding strings of physiology rather than those of mere anatomy

Until physiopathology rather than anatomopathology is made the frank basis of clinical neurology there can be but slight hope of intelligently understanding why a paralysis is sometimes spastic and at other times flaccid, why a deep reflex is in one disease lost and in another

1 Pathologic Physiology a Neglected Field," THE JOURNAL A. M. A., Dec. 30 1905
2. 'Value of the Physiologic Principle in the Study of Neurology Boston Med. and Surg Jour Dec. 5 1904
3 'The Problem of Psychiatry in the Functional Psychoses,' Am. Med. Feb 3 1906
4 Med. Record Oct. 5 1901
5 Les Centres Nerveux 1905

disease exaggerated, why the electrical reaction of degeneration appears with one form of muscular atrophy and not with another form, why an illusion of one of the special senses is not the same as an hallucination of that same sense, why tactile sensibility can remain intact while the pain sense is completely abolished, why a tumor of one part of the brain presents a very different clinical picture from a tumor of another part of the brain.

Those of us who are teachers of neurology are not entirely without blame, for until we cease confusing our students and readers with two notions of the same thing we must expect them to complain and look askance at our specialty If we tabulate tabes dorsalis under the head of spinal cord diseases, and then in the opening paragraph of our description declare that it is a disease of the peripheral sensory neurons or apparatus, if we classify acute anterior poliomyelitis, an inflammatory trouble plus certain secondary degenerative changes, with the primary, systemic degenerative troubles, if we present in a section of our book headed diseases of the spinal cord an elaborate account of cerebrospinal disseminated sclerosis and then devote three-fourths of the description to head symptoms, if we assert that exaggerated knee-jerks occur in certain spinal as well as in certain intracranial troubles, without furnishing at the same time some physiopathologic explanation, if we do all this and many other inconsistent things, we need not marvel at the impatience of our audience The fault is with ourselves, for we have been mixing up old anatomic with new physiologic conceptions For the sake of consistency, if not for anything else, we should discard the one and cling firmly to the other

As Putnam[2] says

> We need all the help that anatomy can furnish, but as it is the organism in activity that we eventually seek to understand, it is necessary that the splendid services of anatomy should be supplemented by physiology, and the physician—above all the neurologist—needs to be trained more thoroughly than at present to work and reason in accordance with physiologic conceptions and methods as applied to the problem of disease

While Cowles,[3] speaking for psychiatry, writes

> It appears that the turning away from the barrenness of histologic provings is becoming general, the improvements of the clinical method and psychologic experiment are inevitably drawing attention to the closer observation of the individual patient and to the better study of the minor causes of his mental variations This means a trend towards physiology

V STATUS OF THE NEURON DOCTRINE

In the evolution of knowledge, there are always two processes by which the desired goal is attained These are parallel processes, equal in dignity and mutually interdependent The one is inductive and involves the simple observation of phenomena, the other is deductive and concerns itself with the correlation and explanation of the observed phenomena. So-called facts are of little practical use to mankind until they are made available by some plausible reason or law for their existence Theories hypotheses, explanations and generalizations are equally futile unless they are based on and are adequately supplemented by a sufficient number of facts It is infantile to dwell in a world of unexplained facts or phenomena, however innumerable the latter may be It is mere day-dreaming to pile up theories and hypotheses without submitting to the wholesome restraint imposed by a constant consideration of observed facts or phenomena The true scientist works for knowledge through both observation and theory

The practical value of a science is enhanced when individual observations and generalized laws are most nearly balanced in value. When the perturbations of the planets, long known to the astronomers as mere phenomena, were accounted for by the laws of Kepler and of Newton, the science of astronomy became exact and of great practical value When the colored composition of light was explained on the hypothetical basis of undulations in the ether, the science of optics became something more than an assemblage of curious exhibitions What has the chemist not done these latter days in discovering and creating strange forms of matter by following the general laws more or less formulated by the atomic theory! Of what interest to any one are the marvelous complexities and anomalies observed in the biologic world until there is some explanation of them suggested in the laws of evolution, embryology and general morphologic progression?

Physiology is the science of life, a pure science It has its mass of observations and its hypothetical explanations Some of the latter have become established laws, while many of the former still remain unexplained In connection with the physiology of the nervous system, the opinion is growing that there is great need of an explanation of the observed phenomena by some fixed law or laws The neuron doctrine suggests such an explanation To repeat what I have written elsewhere

> Of all the generalizations of science, none have been more brilliant, more illuminating, more practical than the neuron doctrine Like all these great scientific generalizations, as, for instance, the law of gravitation, the atomic theory of chemistry, evolution, the nebular hypothesis and the undulatory theory of light, it is an inference merely, drawn from and propounded to harmonize a great mass of seemingly anomalous and unrelated facts and phenomena It is not put forth as an infallible truth It is open to future modification, and, if need be, to entire annihilation, should future discoveries be made that contradict its present teachings

Up to the present time no discoveries have been made that tend to overthrow the doctrine in its essential features, though as in all progressive knowledge, many observations have been made and are being made that necessitate a readjustment and a restatement of some of its minor conclusions All due allowances being made for the work and opposition of Bethe, Apathy, Nissl, and others, anyone who carefully follows both sides of the controversy can not fail to see that in the main the neuron doctrine remains unaffected This is not stated in so many words by Barker[6] in his recent well illustrated review of the whole subject, for he wishes the reader to judge for himself, but his implied conclusion, as well as the conclusion that any unbiased reader of this review must come to, is that the neuron concept need not yet be abandoned [7]

VI PHYSIOLOGIC UNIT, THE NEURON

The essential fact which the neuron concept inculcates is that the nervous apparatus parenchymatously consists of a physiologic unit immensely multiplied and interrelated with other similar units In this the doctrine is nothing but a general restatement of the cellular doctrine for the nervous system This is the feature of the doctrine

6. "The Neurons," THE JOURNAL A. M. A., March 31, 1906.
7. During the revision of this article for publication the paper of Collins and Zabriskie on the "Neurons and Neurofibrils" appeared in the *Medical Record* (June 16, 1906). It is a very full review of the present teachings anent the [illegible] and a fair exposition of both sides of the de[illegible]sions is the statement that "although t[illegible]sity to modify the neuron theory noth[illegible]cause it to be abandoned."

that still remains unassailed by any discovery that has hitherto been made As a doctrine, it has overthrown the old notion of the nervous system being made up of two sets of elements, cells and fibers There is only one element, one unit, and that a physiologic unit This it has named the neuron The definition of this neuron is the field whereon is waging the battle of opinions anent the validity of the doctrine The latter asserts that the cell and its processes (dendrites and axons, formerly called fibers) constitute a solidarity, a single, integral factor, all parts of which are relatively of equal morphologic and physiologic importance Certain subsidiary deductions made when the theory was first put forth have, as a result of later discoveries, been greatly modified or entirely given up The notion of an ameboid movement being possessed by the neurons, though never very earnestly upheld, has at last been completely relinquished

The discovery of neurofibrils that pass through, surround and connect the cellular elements has not only abolished the early teachings anent the contiguity of the neurons as opposed to the continuity of the nervous system, but has given birth to the catenary theory of Bethe wherein the nervous apparatus *in toto* is looked on as a continuous chain of conductors, a circle without beginning or end, like the vascular system It must be admitted that if these neurofibrils do not convince one entirely of the continuous chain theory, they do demand of the neuron doctrine the adoption of a modfied notion of partial continuity between the neurons Much has yet to be learned and confirmed, however, even in regard to these fibrils before they may be used as the basis for dogmatizing and causing the complete abolition of older ideas Indeed, as Barker[6] well says, "in the light of newer studies, the enormous importance attributed by Bethe and Nissl to the Golgi nets seems to have been premature, their views are unsupported by facts." Without stopping to discuss these neurofibrils in more detail, for Barker,[6] Collins and Zabrieskie[7] and others have done this, I would say that they do not overturn the neuron doctrine in its essential features, and moreover, that they are less adequate to found a theory on than are the so-called neurons of the latter theory Whereas the latter offers some reasonable explanation for a large number of common clinical phenomena, the catenary theory simply adds confusion to what is already steeped in mystery [8]

Other modifications that have had to be made in the earlier teachings of the neuron doctrine have been in connection with the question of the Wallerian degeneration, the development of the nervous elements, and their autogenous regeneration These have all been discussed, and the arguments *pro* and *con* been carefully weighed by Grasset.[5]

A summary of the whole matter seems to show that both the neuron doctrine and the catenary theory in its latest form agree in adopting a physiologic unit The character of that unit in regard to its minute structure appears to be the point whereat the two theories diverge The *neuron theory* (Waldeyer) defines the neuron as a cell with its processes The catenary theory (Durante) declares for a "pluricellular unit," which is compared to a "primitive nervous lobule," Durante objecting to the term neuron on the ground that it is strictly a cytologic and not a physiologic term As Barker[6] concludes anent this latter point, "should it have been made out that the neuron is pluricellular in its origin, the anatomic unit which Waldeyer called the neuron would still have existed It would have been an organ then, rather than a single cell"

From the clinical and physiologic standpoint, then, the distinction between the two doctrines is one largely of terms The neuron doctrine yielding to the view that the physiologic unit is polycellular, and the catenary theory accepting the idea that the nervous apparatus is made up of innumerable functional entities, there is no reason why the established and familiar term neuron should not be kept in use to represent this well recognized physiologic unit, while its minute structure and minor physiologic importance is left for future investigations and positive establishment

VII THE NEURON CONCEPT AND CLASSIFICATION OF DISEASES

In his address, Barker[9] said, while referring to the value of a functional conception of disease

> As medicine has become more scientific, the mind has ceased to be satisfied with such descriptive classifications as the clinical symptoms and syndromes represent and with "clinical types" set up, and is ever on the alert to replace them by classifications of a developmental or genetic character

This is especially true of neurology As I have already intimated, I believe it is one source of the confusion which students and practitioners complain of in connection with neurology as presented in the average textbook The old classification, based on old anatomic teachings, which so largely prevail are contradicted and nullified by the modern teachings of the physiology of the nervous system

It was with this thought in mind that Grasset,[5] doubtless, determined to discard entirely the use of the terms cerebrum, cerebellum, medulla oblongata, spinal cord, peripheral nerves, etc, in his presentation of the subject of neurologic diagnosis Adopting the neuron as the physiologic unit and studying especially the different functional apparatuses in which this physiologic unit is specifically aggregated, he presents the whole subject of neurology (save therapy) under the following physiologic captions 1, The central nervous apparatus of motility and general sensibility, 2, the central nervous apparatus for orientation and equilibrium, 3, the central nervous apparatus for language, 4 the central nervous apparatus for vision, 5, the central nervous apparatus for hearing, taste and smell, 6 the central nervous apparatus for the circulation, secretion, nutrition, digestion and respiration

Realizing in like manner the inadequacy of the present anatomic classification of nervous diseases and the fast growing need of their study and presentation along physiologic lines, I presented in my "Diseases of the Nervous Sytem," a work appearing several months before Grasset's, a tentative classification based broadly and frankly on a physiopathologic groundwork Like Grasset, I adopted the neuron concept as it was in the main then accepted I first contemplated the nervous system

8 As Collins and Zabrieskie (footnote No 7) well argue, the one thing that is needed by the opponents of the neuron theory is to show the transition of a sensory centripetal impulse to a motor centrifugal tract without the intermediation of a ganglion cell. If they could do that their claims would be established. Whether they first go in or come out of the cell whether the elementary trellis formation is originally extra-cellular or intracellular whether the fibrils are at all interrupted at Ranvier's nodes or whether there is a free peripheral termination are all matters of trivial importance compared with this for then the neuron theory would lose its applicability and usefulness to the problem of physiology and histology"

9 Methods in Medicine, Boston Med and Surg Jour, June 1905

as being made up of two distinct sets of tissues, the true, functionating tissues (the neurons) and the mere supporting nutritive tissues (the vascular, connective and neuroglial elements) This distinction, of course, was primarily made for its physiologic bearing This made a grand division of nervous diseases, so-called, into those primarily neuronic and those primarily non-neuronic or extra-neuronic In the latter the neurons are usually more or less damaged, of course, but secondarily Tabes dorsalis, for example, I placed among the neuronic affections, myelitis was regarded as primarily an extra-neuronic trouble, with secondary complication of the neurons Amaurotic family idiocy (Sach's type) was a neuronic disease, infantile spastic diplegia was primarily a vascular or extra-neuronic trouble Acute anterior poliomyelitis and intracranial hemorrhage were both extra-neuronic outbursts, the subsequent degenerations respectively in the anterior root fibers and pyramidal tracts were secondary neuronic implications or sequelæ as it were

The practical value of this functional differentiation of the two sets of diseases will be noted on careful consideration In the neuronic diseases, degeneration is the dominant pathologic change This degeneration may be developmental (Gowers' abiotrophy) or acquired Heredity, with all that it includes, is prominent among its etiologic incidents and second to heredity, with which it usually works in conjunction, is toxemia In the extraneuronic diseases, inflammation and vascular changes constitute the cardinal pathologic presentation, and for the production of these the leading etiologic factors are toxemia of every sort and traumatism Symptomatically, the neuronic diseases are strictly neural and well defined along neural lines, they are preeminently and wholly nervous, their manifestations are beautifully and sharply sensory, motor, trophic and all combinations of these, they rest clearly on the physiology and physiologic anatomy of the nervous apparatus

Symptomatically, the extraneuronic diseases primarily manifest themselves by well-known general signs of vascular disturbance, the febrile picture is always more or less in evidence, these vascular symptoms being generalized and so prominent, the more strictly neural symptoms, depending on the secondary involvement of the neurons, are somewhat mixed, obscure and less well defined than they are in the neuronic diseases From the prognostic point of view, the neuronic diseases are all but hopeless (possibly because of the dominance of the hereditary, neuropathic factors), only when the damage is very slight and the degenerative process is in its incipiency can recovery be looked for, in most cases a cessation of the degenerative process is the best that can be expected On the other hand, the extraneuronic diseases are relatively more hopeful, their prognosis is almost the same as that of the same sort of disease occurring in other than the nervous system, and must not be confounded with the more hopeless neuronic prognosis of the secondarily implicated neurons For instance the prognosis of tabes dorsalis is not hopeful, as we all know, because the trouble is primarily neuronic, the prognosis of anterior acute poliomyelitis as a vascular disease is excellent though the outlook for the secondarily damaged neurons of the anterior cornua is bad The distinction of neuronic from extraneuronic affections has its practical value, if one thinks of it, in the matter of treatment

Continuing this tentative physiologic classification I next subdivided the neuronic diseases into the so-called functional and organic, explaining the while that, in my opinion, these terms represent merely differences in degree rather than in kind in the matter of the pathogenesis and pathology of the disease This I have discussed briefly in an earlier part of this paper The so-called functional neuronic diseases (diseases merely with undiscoverable histologic changes with our present means of investigation), the conventionally named neuroses and psychoneuroses, were divided into those of the cerebrospinal and sympathetic systems, because these systems as separate aggregations of neurons represented a more or less differentiation of function, while the organic neuronic diseases were classified for a like reason into those of the afferent system, the efferent system, and the combined afferent and efferent systems

At this point the strictly and integrally neural diseases cease Resuming, however, the classification of the extraneuronic maladies, and remembering that there are no functional differentiations in the vascular and connective tissue elements of the nervous system, these diseases were grouped under the head of brain, cord and peripheral nerve affections, the terms brain, spinal cord and peripheral nerves being employed merely for their topographical or, to use Grasset's[5] term, geographical, signification The following schema shows the classification at a glance

NEURONIC DISEASES (DEGENERATIVE)

a The functional neuronic diseases.
  1 Cerebrospinal
  2 Sympathetic.
b The organic neuronic diseases.
  1 Of the afferent system
  2 Of the efferent system
  3 Of the combined afferent and efferent systems

NON NEURONIC OR EXTRANEURONIC DISEASES (INFLAMMATORY ETC)

a. Of the spinal cord and its membranes
b Of the peripheral nerves
c. Of the brain and its membranes.

I confess that in completeness of radical change of method, Grasset has far outstripped me in the attempt to present the diseases of the nervous system with a physiologic classification Perhaps, however, at the present time when the pathology and the neurologic status of some diseases are still in dispute, a less radical change than that of Grasset may have its advantages

100 State Street.

DISCUSSION

DR HOWELL T PERSHING, Denver, asked Dr Mettler if, after all, the reclassification would not be an anatomic one, not according to the old gross anatomy, but according to the finer anatomy of the nervous system

DR. L H METTLER, Chicago, replying to Dr Pershing's question, said that it is a new anatomy, a physiologic anatomy Dr Mettler said that Johns Hopkins, one of the oldest medical schools in the country, only recently opened a laboratory for the teaching of abnormal physiology All the other schools teach normal physiology, but still neglect abnormal physiology, except what little the student is able to pick up from the clinical department The anatomy Dr Mettler spoke of is anatomy combined with modern physiology, and not the old anatomy as usually taught.

Unnecessary Noise.—In all seriousness, however, we would commend to all those who come in contact with the sick that this subject of unnecessary noise be given careful consideration To the youthful internes of hospitals or residents of sanatoriums we respectfully request that they exercise some of that rare quality known as thoughtfulness, and eschew hobnail boots, the slamming of doors and other manifestations of youthful over exuberance of spirits.—*Journal of the Out door Life*

HYSTERIA IN CHILDREN *

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Among the most toilsome efforts expended in the service of neurology have been those directed at a finer appreciation and better understanding of that most protean of all disorders, hysteria As it happens in the adult, it requires no introduction, of its occurrence in the child, I believe enough has not been said

The preponderance of ardent study has applied to the intellectual and moral side of the young, with the attention especially riveted on an increasingly large number of irritable, unstable, capricious, precocious, eccentric neurotic children, whose minor mental abnormalities have always been a matter of deep concern alike to parents, educators and physicians

Perhaps the zeal and energy consumed in understanding these, together with backward and degenerate types, has somewhat retarded the interest in hysterical phenomena, be that as it may, writers in general certainly have not given the subject of juvenile hysteria the illuminating presentment it deserves As a result some few specialists and many more practitioners somewhat hesitatingly acknowledge that hysteria is ever exhibited in child life I have sought for evidence of agreement as to the occurrence and particularly the prevalence of it in several approved text-books on neurology and pediatrics, but, on the whole, the references have been somewhat disappointing

Holt[1] introduces the subject as follows "This (hysteria) is not a disease of childhood, but one which is occasionally seen in early life," adding that it is very rare before the seventh or eighth year, occurring most often in children after the age of 10 Sachs[2] also inveighs against the idea that hysteria is ever a common disease and says "Hysteria is a rare disease in the adult still rarer in the child" Taylor[3] devotes a short chapter at the close of his book to functional paralysis and scatters a few references elsewhere about hysteria associated with epileptic, myasthenic and myoclonic states Gowers,[4] in his earlier edition, supplies the Briquet and Landouzy table, which places 8 per cent. of all hysteria in the first decade of life, and adds that cases met with under the age of 10 generally commence after 6, although symptoms have occasionally been met with at 3, 4 or 5 years Oppenheim,[5] aside from having often seen hysteria in the years ranging from 4 to 6 and repeatedly from 8 to 10, alludes to hysterical manifestations appearing as early as the age of 2 and 3 Baginsky[6] includes hysteria in his consideration of psychically defective children Church[7] is in agreement with Oppenheim, stating that the age of puberty and the years of adolescence immediately following, furnish the majority of cases, adding that before 10 it is common, but children may develop it in very marked form even as early as 2 or 3 Koplik,[8] who, in his 1906 edition of children's diseases, is abreast of the best pediatric thought, says "It is not a true disorder of childhood," and then quotes Steiner, who states that 16 per cent of all cases of hysteria occur in youth. He arranges the symptoms under two captions 1 Psychic or nonconvulsive, 2, motor or convulsive I refrain from quoting French authors, since hysteria to them is neither a respecter of age, sex or previous condition of servitude Thus it will be seen that some of the modern text-book makers concede a juvenile, even infantile, form of functional disorder akin to that appearing in adult life, but do so with a reserve which begets doubt in the mind of the average reader

To dissipate misapprehensions of every sort on the subject and show that tender years are not proof against hysteria, to reaffirm its frequent occurrence and emphasize its most characteristic phases is the object of this paper

ETIOLOGY

For our first tentative knowledge of hysteria adultorum, we must go back to the Hippocratic view that held hysteria to be a disorder of uterine origin, hence restricted to females This idea was opposed as early as 1617 by Carolus Lepois, whom Tourette also credits with being the first observer of hysteria as a not rare disease in children Hoffman, in 1733, and Raulin, in 1759, evidenced in their general writings a clear idea of the subject

It was reserved for Briquet,[9] in 1859, to correlate facts from his vast material that have given unqualified support from that day to this of the occurrence of juvenile hysteria as a common affection His apparently extravagant claim that one-fifth of all cases of hysteria are developed before the twelfth year and that about 5 per cent of the patients are males has found reiteration in the most recent figures by Bruns, who states that the ratios established "are not excessive, but less than the actual truth"

Since Briquet's time, Bourneville, Guinon, Tourette, Ollivier, Richer, Charcot,[10] Bezy and Bibent[11] of the French school, Seeligmuller,[12] Henoch, Jolly, Oppenheim, Strumpell, Thiemich, Binswanger and Bruns[13] of the German school and Putnam,[14] Mills and Taylor of the American writers, contend for the frequency of hysteria in childhood That the French have hysteria more constantly with them than the Teutons or Anglo-Saxons may be true, but it is equally certain that the latter peoples are not so entirely exempt as might be supposed from the imagined relative absence of emotionalism in their make-up

That hysteria in children points to a defective system in modern education or is the expression of an effete civilization is, I believe, too presumptuous a statement, since large statistics show the major forms, those with palsies, contractures, passional attitudes, violent motation and convulsive seizures to be recruited from isolated rural districts and not from the great centers of urban activity

The age limit from 4 to 14 has already been referred to, but hysteria most frequently develops between 6 and puberty Bruns[13] agrees with Briquet[9] in stating that

* Read at the annual meeting of the Illinois State Medical Society Springfield, May 16 1906.

1 Diseases of Infancy and Childhood, 1896
2. Sachs Nervous Diseases of Children" 1905
3. Taylor "Nervous Diseases of Childhood, 1905
4 Gowers "Diseases of the Nervous System 1896
5 Oppenheim "Lehrb d. Nervkh.," 1905
6 Baginsky Lehrb d. Kinderkh 1902.
7 Church Nervous and Mental Diseases 1904
8 Koplik Diseases of Children 1906
9 Briquet "Traité de l Hysterie" 1859
10 Charcot Prog Med 1882.
11 L Hysterie Infantile et Juvenile Monograph, 1900
12. Seeligmuller Deutsch med. Wochschr 1881
13 Bruns Die Hysterie im Kindesalter Monograph" 1906
14 Putnam Jour Ner and Ment. Dis 1892, xxvii

the ratio of juvenile to adult cases of hysteria is 1 to 5, one hysterical child to five hysterical adults The average sex ratio between children is 2 to 1 in favor of the female, but with approaching puberty the tendency is for female types to increase and male types to decrease To correct an erroneous impression, the pampered, spoiled child of the idle rich does not, by reason of its educated tastes and esthetic habits, alone fall heir to this affliction Again, if statistics are to be valued, the poor and uneducated child of ignorant parents is equally susceptible and by some thought to be the more vulnerable of the two

The monster predisposing agent, the *agent provocateur* (Charcot), to which all authors refer with great reverence is heredity In a retrospect of one's ancestry, searching the byways as well as the highways, it were well nigh impossible not to come across some one member possessed of a friable or impressionable nervous system Under Charcot, the French learned to grow fetichistic about heredity as a factor in the production of hysteria, others, again, think that many of the hysterical manifestations can be better explained in other ways However that may be, the potential force of direct transmission must be admitted without the least reserve

That hysterical symptoms are frequently engrafted on symptoms of organic disease and long outlast the latter, is, of course, not to be lost sight of This is especially true of neuralgic and arthritic conditions following trauma The genuine disability prepares the soil for further exaggeration of pain in an already impressionable child, and in the case of joint injury, for instance, hysterical tenderness, limitation of motion and contractures often supervene long after the original defect has subsided. Instances of this kind are cited later on

A child's conscious aptitude for imitating the peculiarities, eccentricities and habits of others may, if long exercised, become a subconscious process, and the capacity for morbid degrees of mimicry shown by some children is truly remarkable That a parent, for instance, may by precept and practice excite a nervous attack in a child is readily understood, but observers have not lost sight of the converse fact that when the neurotic tendency is strongly expressed the child may with equal facility induce a seizure in the parent A sensitive child is quickly overwhelmed by what it sees, hears and feels and, under the ban of vicious example, weak discipline and an uncontrolled will, it requires but a brief period in which to elaborate a host of morbid impressions So it is that hysterical parents have hysterical children

In purely psychic cases of hysteria, isolation operates with excellent effect and works some speedy and wonderful cures All of the underlying causes do not operate in each case of juvenile hysteria, but in every case we have to do with a psyche that is diseased, a psyche grossly perverted, modified by the influences of emotional or physical distress or both, but disaffected by actual organic disease

SYMPTOMATOLOGY

If one waits calmly for all the so-called stigmata and accidents of adult hysteria to be present before venturing the diagnosis, there will be little hope of ever recognizing this disase as it affects the child

Juvenile hysteria in its objective manifestations is chiefly monosymptomatic By that I mean that a localized paralysis may be the only physical finding in a case, or possibly one other symptom be associated with it to warrant the diagnosis in marked contrast to the adult type in which the hysterical syndrome is hardly ever complete without stigmata and accidents in great numbers A single hysterical symptom, standing out in bolder relief in the child than it would in the adult, should from its very prominence arouse a suspicion as to its functional nature

The paralyses of hysteria resemble those of organic disease neither in the manner of their distribution nor in the character of their onset or duration. In children monoplegias and paraplegias are frequent, and hemiplegia occurs, but always without involvement of the face These palsies confined to a single limb usually appear with apoplectiform suddenness, are characterized by flaccidity, normal tendon reflexes, and in long-standing cases by very slight degrees of atrophy from disuse Seen at short intervals, it is amazing how variable is the extent and degree of paralysis Indeed, the rapid fluctuations from bad to worse and good to better should suggest the diagnosis Associated with long-standing paralyses are the well-known contractures of functional type, marked in degree relaxing only in deep sleep or narcosis and painful to the touch

A child naturally takes smaller steps in walking than a grown-up person, and is in general more impulsive and less coordinate in all movements When not hindered by pain, the mere knowledge of partial impairment is not always enough to remove haste, and this gives rise to jerkiness and dangling movements plainly seen with every hurried effort to advance the leg in locomotion In several cases of monoplegia affecting the lower extremity I have observed a limp paralysis with some downward flexion of the foot, but in walking the scraping of the toes and sickle gait characteristic of organic hemiplegia were lacking The astasic-abasic syndrome is very common in children Bruns[13] thinks at least ten times more frequent than in the adult Case 3 beautifully typified this phenomenon

Some authors assert that areas of hysterical anesthesia, especially the "glove" and "stocking" varieties, occur with as much frequency as in adults, but my few observations harmonize better with the conclusions of those who think that anesthetic zones are only very rarely met with The explanation for their absence is not far off An adult is profoundly concerned about his utterly helpless extremity and gets the idea that if his arm is paralyzed for motion it must be paralyzed for sensation, if he can not move a limb, it naturally follows that he does not feel with it, and this suspicion grows to conviction with the physician's first suggestive inquiry and sensory examination If at first the patient thought his tactile sense was impaired, he now is sure of it, for verily the physician tested it and, behold, it was absent I believe with Strumpell that the mental attitude governing the display of sensory phenomena is so largely induced by objective examination and special tests that these stigmata no longer enjoy the clinical importance ascribed to them by earlier writers The child's mind is not given to complicated mental maneuvers, and in the presence of paralysis it has a simpler interpretation for the feeling left in a paralyzed extremity namely that of discomfort Sensitiveness was precisely the complaint and response I received in almost all instances in which sensory tests could be relied on at all On the whole I should say that sensory disturbances are rarely noted in children that when present they are almost always of the hyperesthetic variety and that hemi-esthe- are practically unknown or have been [illegible] dren of more advanced year

When an anesthetic zone, suggested or otherwise, is found to be present, it is the same unanatomic, sharply demarcated, rapidly shifting area that we are privileged to observe in adult hysteria.

Hysterical motor agitation in children is expressed in the form of choreic movements, a variety of facial habit spasms, convulsive tics, and epileptoid seizures The graver forms of hysterical spasms are frequently mistaken for epilepsy and the less pronounced ones are conveniently evaded with a diagnosis of hystero-epilepsy Even when attacks of major hysteria (as described by Charcot and Richer) occur, as they sometimes, though rarely, do in children, we have a state of retained or semi-retained (never altogether lost) consciousness to deal with In these cases, too, the widely and irregularly distributed hysterogenic (convulsion inducing) and hysterofrenatoric (convulsion allaying) points respond to the slightest pressure and initiate a seizure unquestionably hysterical in character The hysterical convulsion is purely a psychic explosion attended with semi-retained consciousness, noisy, screaming delirium, violent motor play in all directions, a peculiar chattering of the teeth, flushed features, resistance of the eyes on attempts at opening them, no aurae, no biting of the tongue, no involuntaries and no personal injuries The differential points between true epilepsy and hysteria should be carefully considered and, even when there is good cause for reservation and doubt, a so-called compromise diagnosis of hystero-epilepsy should be discouraged

Choreic movements in hysterical children are not at all infrequent, and as for frank chorea it is by no means rare Bruns[13] is of the opinion that a large number of recurring choreas are hysterical, that a genuine metarheumatic chorea may have existed in the first instance, but that subsequent attacks were nothing else than hysterical imitations of the first, yielding to suitable treatment

The polymorphous symptomatology would be rather incomplete without mention of such commonly noted phenomena in child hysteria as aphonia, mutism, stammering and blepharospasm

CASE REPORTS

In the past few years it has been my privilege to see 10 picturesque cases of juvenile hysteria, and I present the histories of 5 of these If I seem prolix, it is because I desire to emphasize and detail the contributing as well as the exciting factors in the neurosis

CASE 1.—Summary *Four-year-old boy, family of "neurotics" insignificant contusion, marked psychic trauma increased by overly sympathetic parents, fleeting monoplegic paralysis, sudden cure*

History.—In July, 1903, I was called in an emergency to see A J, aged 4, American born, a boy in a well to do family, who in the course of rough play had fallen and hurt his right arm I had never before rendered the family a service The mother was much excited, betraying enough sympathy and devotion to win over the affections of a regiment of children. In her anxiety, she had her husband and mother telephoned to about the terrible accident that had befallen the boy, and anticipated for everybody's benefit and within hearing of the child that the doctor would say the arm was broken Fully 15 minutes were consumed in this preparatory display of nervous distress before the child's jacket was removed and the arm inspected. The history was that of a fall from a very low play wagon

Examination.—Patient was slight of build, pale, and very fidgety throughout the examination, whining and crying whenever or wherever he was touched. The forearm showed a soft swelling from contusion at the middle and extensor aspect, which nowhere reached to the joints, the long bones of the forearm could readily be felt and were unhurt in their entire continuity from elbow joint to wrist The arm was held rigidly flexed and adducted to the body Every attempt to extend it was attended with screams from pain Joint involvement could from the nature of the fall and the examination be absolutely excluded. Hot applications of ext hammamelis were advised for the soreness and swelling, and a cumbersome dressing purposely avoided to disabuse the patient and family of the idea of a grave injury Two days thereafter the mother displayed such intense feeling in the matter of a permanent bandage for the arm that of her own accord she swathed it in dressings and talked freely of x ray and possible fracture

Further History.—A second examination a few days later convinced me that nothing was wrong except the swelling, which was already one half subsided, but the child said all the fingers were getting stiff and efforts to half extend the over flexed forearm were met with a snapping back and rigidity The greatest pain was in the joint The parents were strongly advised not to interfere, but make the boy eat with his right hand and play about without restraint

Two days later the boy's arm was again examined by request, and instead of being held rigidly flexed was dangling limp by his side, passive movement at the joint was easily performed without pain, but the fingers and wrist were completely paralyzed

The child was being fed and dressed and only allowed to play a little out-of doors Again the patient was encouraged by me to use the arm and hand vigorously, which advice the mother resented and thought cruel After some days, I came across the boy in wild play with other children in the street, and had an opportunity to watch his antics for a full quarter hour He pushed and shoved and was rolled about by the playmates without once showing disability, but the nurse who was in attendance, warned him to be careful of his hand.

Another week and I was requested to pass on the condition, since the child "could not eat," cried with pain in the wrist for hours at every bedtime, and the arm was again stiff and contractured at the elbow I visited the child purposely at night when it had been asleep for an hour with the arm loosely resting on an extra pillow The first grasp of the arm almost awakened the boy and caused it to get spastic with immediate contracture at the elbow, but on letting it go, it relaxed again, influenced by the deep sleep I then made one final effort to correct the attitude of the parents, getting their promise to discipline the child by giving him nothing to eat unless he ate with his right hand Two trials and sympathy triumphed, the child was fed. The next visit, with now almost a month elapsed since the fall, was paid at my office, where, with a small (so called family) battery, a succession of electric shocks cured the boy in one sitting, and to my knowledge he has not since even so much as complained of weakness in the hand, and that is now almost three years ago

CASE 2.—Summary *Seven-year old girl, in convalescence from scarlet fever, strange attacks of screaming by night and weak spells in legs by day, anomalous reflexes Heredity good Manifestations regarded as hysterical Cured by hospital isolation*

History.—M W, female, aged 7, was brought to the clinic for nervous diseases at Northwestern University Medical School, Sept. 30, 1905, by her mother, who said that six weeks previously the child had come down with scarlet fever and was convalescing nicely until two weeks ago, when, during the night, at about 12 o'clock, she awakened with the most violent pains, apparently only in the legs, which were well drawn up on the abdomen and held in a most cramped position The mother added that the calf muscles were "lumpy" in spots and the spasm, lasting about 15 minutes, was attended with agonizing screams Long rubbing relieved them on the first night.

The second night, about the same time (midnight), the child had another leg spasm, screaming at the top of her voice with pain, throwing herself about and horribly distorting her features This attack, of 20 minutes' duration, frightened the mother badly, who again worked vigorously over the child, rubbing the "lumps" out of her calves and applying hot flannels For the first week the patient had these spells at nearly the same hour every night, and each time they seemed worse

than before, lasting anywhere from 20 to 30 minutes, and ending, after exhaustion and much petting, in sleep Four days ago the mother became alarmed at a spell the child had before going to school, in which her legs gave away completely, and the seizure of pain, associated with spasmodic throwing about of all the extremities and fearful screaming lasted 15 minutes While leading her to school the child fell down so often in every block that the mother practically had to carry her all the way The mother has had this same experience daily, and on her way to the dispensary to-day was compelled to stop three or four times in every square

The mother, an extremely sensible, quiet and tactful sort of woman, worn out from her broken night's rest, began to think something must be wrong with the child, and requested an examination and diagnosis The child's antecedents were entirely free from neuropathic taint so far as the mother knew, the family were all rugged Hollanders and more phlegmatic than mercurial in temperament The little patient had neither seen nor heard anything of "fits"

Examination—This revealed a slender child, tall for her years, whose pallor of skin and mucous membranes might be attributed to her illness of scarlet fever Heart and lungs were negative The cranial nerves were uninvolved, the faucial reflex was absent, the jaw jerk and upper extremity reflexes were brisk. The knee jerks were absent and for a moment this suggested some organic disease, but with the legs hanging, and by aid of reinforcement, they responded promptly and equally The Achilles reflex was bilaterally present, only, however, with reinforcement, the plantars were present also The child complained of tingling in the arms and hands and tenderness in the leg muscles, although evidence of any weakness in them was lacking In the presence of these symptoms, a possible beginning (post scarlatinal) multiple neuritis was thought of, at any rate, some toxemic process A positive diagnosis was withheld, the patient was given Basham's mixture for her anemic condition, and asked to return in another week.

At the second visit, two weeks later, the mother declared her experiences had nightly been the same, and she was too exhausted to continue the strain unless something could be done for the child.

Hospital care would have been advised at the first visit but for the possibility of spreading an infection during a delayed desquamative period Now, however, some nine weeks had elapsed and it was safe to refer her to Wesley Hospital In the children's ward of the hospital, the blood and urine examinations, repeatedly made, were negative Nurse and interns were instructed seemingly to disregard the patient, and yet watch carefully for any disturbances, especially at night. The mother and relatives were not allowed to see the child. She remained in bed for two weeks, was up and around one week During all that time she slept soundly all night and acted normally throughout all the days

CASE 3—Summary *Four year-old girl of neurotic stock, bad tempered, purely hysterical convulsions, anomalous reflexes, astasia abasia, cured by isolation and appropriate method of disregard*

History—A L., aged 4 seen July, 1905, is a female of Jewish descent. The parents of the child are in modest circumstances and the father has been in poor health for many years Domestic cares have made the mother nervous and neurasthenic The whole line of near relatives are neuropaths, and within the past three years, one uncle and two aunts of the child were committed to the care of state institutions for one or another form of mental derangement

The child was a breast fed baby, of extraordinary build, and presented no signs of rickets Neither the history nor physical findings spoke for syphilis Trauma was denied About three months ago she showed a disposition to be quarrelsome in play with neighbor's children, and has grown intensely irritable without apparent cause

Four weeks ago, while playing with dolls, patient got over heated in the kitchen and had what her mother called a "fit," which she described as follows The hands were first stretched full length above the head then thrown wildly about in the air, the body alternately stiffened and relaxed the legs kicked in every direction until trunk and limbs finally got very rigid and the chest was convexly raised from the floor She was so frightened at the sight of this that she called to her next-door neighbor for help She could not say whether the child frothed at the mouth or twitched in any particular part. When the attack was over the child had a crying spell, and was put to bed for the day The next day she was up and well as if nothing had happened. The next spell followed a reprimand from the mother, and took its beginning in the mother's lap, the child sliding to the floor while screaming, jerking, frothing, breathing heavily, grimacing and making sucking, noisy movements with the mouth This attack lasted about 10 minutes Two subsequent attacks were induced by parental opposition and under stress of great emotionalism.

Three days ago, the date of the last attack, in a fit of anger at being refused some cake, the child slid from a high chair in one of these bizarre paroxysms, both limbs being crossed under her in extreme position as she fell. When the attack was over she could not get to her feet, and having bruised her shin was put to bed I was called to see the child because it could not stand up and the parents feared some paralysis

Examination—The child presented an absence of the corneal reflex, "tickle" sense in the ear and nose was absent, the tendon reflexes were everywhere brisk, the child moved its limbs in bed when asked to do so, but a species of negativism was present in all the movements, for instance it would not voluntarily draw up the legs, but if the feet were tightly held at the ankles and drawn downward, strong efforts were made to oppose the extension, and when let go strong reflexion took place, the converse held true in extension maneuvers and I was fully convinced of the motor strength and unimpaired state of coordination, but the child would not stand and could not be stood up in bed The knees would give way and the flaccidly held legs bend under their own weight.

Treatment—The child was commanded to walk without success Isolation was next recommended, but since hospital residence was strenuously disapproved of, it was decided to remove the child to a favorite aunt's house, isolate her there, and leave her for three months For the first two days the child was ordered practically starved, and then far from her bed was placed a bowl of milk toast, toward which she quickly walked and hurriedly devoured

In a week she was entirely cured of her astasia abasia, and in three weeks returned home, and has, to my knowledge, had no recurrent attack

The absence of unconsciousness, biting of tongue, involuntary micturition, the prolonged duration of attack, upward of 10 to 15 minutes, the premeditated and emotional onset, the absence of initial personal injury, argue in this case for an hysterical attack, the physical findings reinforce this suspicion and the astasia-abasia completes it beyond peradventure of a doubt

CASE 4—Summary *Thirteen year-old girl, bad heredity, psycho neurosis developing with pubescence, mutism and tris mus, convulsions, hysterogenic zones, sensory stigmata, altered mentality, no opportunity afforded for treatment*

History—C W, female, aged 13, of Swedish descent, blonde type and very anemic in appearance, was seen at her home Oct 23, 1905 The patient's grandfather was insane and her father a confessed hard drinker The girl was the third of five children, all of whom had grown up strong and well except one, an idiotic brother, who died, aged 3 With the advent of menstruation, which set in at the early age of eleven the patient became gloomy and despondent without apparent cause The mother states the mental change was complete Her quiet way of doing things was replaced by cranky and irritable conduct, much weeping, depression and aversion for the society of other children

It was hoped that taking her out of school for a year would materially improve the girl and it did although during this interval she had frequent fainting spells at the dinner table which her physician attributed to anemia of the brain and which were not benefited by protracted dosage with iron On the occasion of one of these spells, she wakened but did not utter a word for two days and had suffocative attacks when ever she drank water, which was oftener than usual With

efforts at swallowing, the jaws and neck muscles would get very rigid, and water regurgitate through the nose and mouth For these symptoms, which the family physician thought were very presumptive of lockjaw, she received one hypodermic injection of morphin This was very painful to her, and after it she slept for ten hours When she awoke her speech was perfectly restored and the dysphagia entirely disappeared Directly after this experience the girl, at the age of 13, was sent to live with her married sister, with the idea that the change would do her good This sister, who was in the fifth month of her pregnancy, developed eclampsia, and our patient unfortunately was compelled to witness the seizures This circumstance brought the child back home, and I was asked to see her because of a series of "epileptic" (?) attacks which developed for the first time one month after having left the sister

A week prior to my seeing her, she suddenly, one morning, while in bed, gave a scream, began to twitch, moan, froth, spit, writhe, roll her eyes, gnash her teeth, get rigid all over, and continued this for several hours, with intervals of three or five minutes of rest At the onset of the attack she passed her urine in bed Getting all these facts, I ascertained that she had experienced no attack in three days I said that "seeing was believing" and suggested the impossibility of establishing a diagnosis from these data Promptly the girl went into a major convulsive seizure of the most grotesque type, frankly hysterical, lasting ten minutes, and terminating only after hard thumb pressure over the supraorbitals

Examination.—Examination revealed hysterical tenderness in the ovarian region and pressure over the left ovary precipitated an attack, which was easily cut short by hand pressure over the epigastrium The patient presented tender spines, hysterogenic zones, and circular "stocking" anesthesia almost up to knees, equally on both legs

Treatment.—This consisted in such isolation as the people could practice in their own home, cold baths, hypodermics of water (because of previous good effect) and no sympathy The people then left the city and I have lost every trace of them

CASE 5.—*Summary* *Five year old boy, severe bronchitis, mild, but continuously annoying cough, shoulder "tic," later, aphonia, no stigmata, cough cured by induced anorexia, "tic" voluntarily disappeared, aphonia overcome by one application of a strong electric current to the neck*

History.—On Jan. 10, 1906, I saw I K., male, aged 5, who had for some weeks been suffering from a hard cold on the chest, perhaps a bronchitis, for which "patent medicines" had been given internally and goose grease rubbings externally The child was delicate and rachitic. The mother was frail and nervous, the father robust and boasted of "never a sick day" The parents reported their ancestry negative for nervous and other diseases The boy was an only and much petted child, who had been reared in a small country town, and had always been hale and hearty prior to this, his first winter season in the city After three weeks of "cold on chest," the parents thought the child should at least stop coughing, but it persisted more or less continuously Nothing was expectorated, nor did the cough come in paroxysms of a croupy character

Examination.—The cough proved to be merely a hard, hacking barking noise, which when associated with a jerky shrug of the shoulders, immediately betrayed its hysterical character During the examination of the chest, when commanded to be still, the child was quiet for 10 minutes or more at a time Attracting the child's attention to his ribs and pressing hard in the right fourth intercostal space in front, would precipitate the harsh cough, which it was difficult to allay Sleep was peaceful and undisturbed during the entire night.

Treatment.—Excluding organic disease on examination of the pharynx and lungs, the child was given a huge dose of syr of ipecac, and responded with several explosive vomiting spells, and enough exhaustion to check both "cough" and "tic" permanently The next day, the child could speak only in a whisper, and the parents, thinking exhaustion to be the cause, felt assured that the voice would get stronger in a day or so They applied hot application and in two days the patient had an almost complete aphonia On the fourth day, after the first visit, one severely unpleasant shock from the electric current applied over the sides and front of the neck made the child scream, and it talked Since that time proper hygiene and tonics have prevented return

DIAGNOSIS

In offering any remarks relevant to the diagnosis, I am keenly aware of saying nothing that has not been often and better said before, but a few general hints may simplify matters for those who have not given hysterical cases special study

Confronted with a case of probable hysteria, the postulate of the German savant, Moebius, is a good one to bear in mind, that "such symptoms may be regarded as hysterical, which can be voluntarily produced or which may be simulated" Strong exception has been taken to this generalization by a few who have noted and denoted ocular palsies, pupillary changes, atrophies and edemas as hysterical. Nevertheless, the Moebius dictum at once prohibits any of the following unwilled phenomena from being classed as functional, the lost knee-jerk, the Babinski toe-sign and the reaction of degeneration, choked disc, optic atrophy, unilateral vocal cord paralysis, incontinence of urine and feces, facial paralysis, hemianopia, decubitus, fever, ankle clonus, marked pupillary changes These signs and symptoms can neither be willed or simulated, they are always the unmistakable signs of organic disease of the nervous system, even though a few may cavil about their rare occurrence in hysteria The Moebius maxim is discountenanced by some because it is said to be unscientific, but this is only a theoretical objection and as such is dismissed Since no definition of hysteria has ever gone forth unchallenged or has proven wholly adequate, it is gratifying to have as a guide some rule which will enable us to assert in a given case —This is a hysterical manifestation, and this is not

Especially important is it in cases of organic disease plus something else to be able to say so much is organic, so much more must be functional The greatest difficulty lies not so much in mistaking organic disease for hysteria, and *vice versa*, as in failing to appreciate that organic disease may be and frequently is complicated by hysteria The liability to error in this regard applies in instances of juvenile as well as adult disease, and yet I venture to say the average physician seldom, if ever, thinks of hysteria in examining the child

First to attract the physician should be the child's temperament The *ego* ever asserts itself, and precocity, irritability, sadness, gladness, as well as a host of petty conceits, emotions and foibles, merit close and respectful attention Since the hysterical child (and, for that matter, the parent also) is very apt to exaggerate every detail of its trouble and the condition giving rise thereto, it is well to note the disproportion between cause and effect in arriving at the diagnosis A slight fall produces paralysis, a tap on the ear deafness, mutism, slight fright aggravates to profound choreic attacks Slight cause, then, and grave consequence should arouse immediately a suspicion of hysteria

The capacity of the young for autoimitation is great beyond measure, and untiring effort should be made to get at all the fads and fancies of the child Febrile diseases conduce to notions of weakness and astasia-abasia results, pharyngeal disturbances subsequently give rise to aphonia, mild rheumatism eventuates in hysterical joint pains or perhaps contracture, cold air striking the eyes develops blepharospasm

It is not always desirable to jump at conclusions, and

the above-named diseases need not have these stated terminations There is no reason why a febrile disease with the patient's inability to stand in convalescence must be astasia-abasia In fact, it much sooner could be poliomyelitis or multiple neuritis, but here again the criteria of organic disease, such as lost knee-jerks, etc, should at once dispel doubt Every rheumatoid condition that ends in stiff joints need not be hysterical, because true ankylosis is the much more common and near explanation Whenever rheumatic chorea recurs it is not as an hysterical imitation, but more often as a genuine second attack of chorea In all these conditions, then, in which doubtful symptoms play a subtle part, the physician should always think of hysteria as a factor ever near enough to be probable, never so remote as to be impossible

A consideration of such complicating states as neurasthenia and hypochondriasis would take me far beyond the reasonable limit of this paper

Just a word in reference to the prognosis, which in children is infinitely better than adults The very young fare even better than the older children in regard to cure, this being no doubt due to their greater psychic susceptibility to favorable suggestion The younger the mind the more readily influenced and the easier the cure Bruns had among his uncured cases only one boy as young as 7, all others ranged from 12 to 15

TREATMENT

Strumpell has said that in hysteria we meet with marvelous cures or no cures at all, and surely this will apply to many of the juvenile forms A fundamental law which should never be lost sight of in treating hysteria is this All hysterical symptoms are psychic, and the means of cure can only be psychic, that is acting on and through the child's mind

An early and complete cure depends greatly on an early and positive diagnosis Prompt suggestion to a child sufficiently old to appreciate it should prove most effective, for the reason that the hysterical habit, if we may so call it, has not had time to grow to morbid proportions

Just as hysterical symptoms are ushered in with slight provocation, so they may be made to disappear with slight but appropriate treatment As soon as the nature of the ailment stands revealed to the physician the parents must be made to understand the crux of the situation and be entirely governed by it They must be told that a dispassionate interest, or, better, no interest at all, is the most wholesome thing for the child Moral suasion is desirable, especially in cases with purely psychic manifestations, and, together with a firm yet gentle order of discipline, initiated early, will result in great and lasting good

When one is denied the intelligent and obedient cooperation of parents, and this is only too often the case isolations becomes an imperative measure Isolation to be complete and effective means no visitors no letters, no messages, in short, no reminders of the past For proof of its efficacy, we are chiefly indebted to Charcot. With no intent to deprecate the talent and skill of the trusted family physician, let it be said that he is not the best nor, as a rule the last adviser in hysterical cases This disease is not a grateful one for the family physician to treat Strange surroundings, strange people and the strangest physician will exert the greatest good and effect the quickest cure

According to Bruns,[13] the etiquette to be observed toward a case of isolation should depend entirely on the nature of the case He has had an extensive experience with two methods called "Die Uberrumpelungs methode" (method of surprise) and "Die Zweckbewusste Vernachlässigung" (method of disregard)

The principle involved in the "method of surprise" is at once simple and logical To emancipate the child from a deep-rooted obsession and do it quickly and completely (in one trial, if possible) is the purpose of the method Give such children a chance to reflect and deliberate, and it means almost certain defeat for the cure

A case of hysterical contracture treated in this manner would perhaps call for the exercise of moderate physical force Assuming the knee joint to be the seat of trouble, use enough strength to overcome the rigidity and spasm and demand of the patient his immediate use of the limb, compelling him to stand or walk When the astasic-abasic syndrome is present, slap the soles of their feet and insist that the child walk Failing in this, it has proven curative to place such a patient in a bath tub, suddenly turn on the cold spray and see him scamper off Intractable cases are reported in which recourse was had to suspension of the child, letting it drop to the hard floor where, from fright and surprise, it would stand glued to the spot This is the psychologic moment in which to take advantage of the child's dilemma and surprise it with the words, after the manner of Bruns, who said, "See, now, you stand nicely and because you can stand you will be able to walk" If my starvation treatment in Case 3 had been a failure, I should have felt justified in trying this "suspension" maneuver

Two rather weak objections have, I think, been raised against the rationale of this method freely used by Bruns Some believe the surprise savors of just enough brutality to induce fright and fear to a morbid degree, that a fright neurosis may thus be superimposed on an already florid hysteria Bruns and others contend that their experience is contrary to this deduction and think the objection not well sustained Another group of conservatives say that the symptom is cured, but not the hysteria, to which Bruns aptly replies that the quick extermination of the initial symptom only too often annihilates the disease

What of the "method of disregard" and the cases in which it applies? Given a child in whom hysterical convulsive seizures or choreiform movements have prevailed for some time, the plan is to have assistants, attendants and especially the physician in charge observe all that goes on carefully at a distance, but to seem utterly indifferent toward all symptoms The patient reflects that no notice is taken because his or her trouble is too insignificant and it fades away to nothingness from the apparent contempt in which it is held

In conjunction with isolation and these clever mental devices, all methods of avail in adult functional diseases are of use here I refer to diet massage, electricity the lukewarm bath and cold spinal douche or the cold drip sheet Hydrotherapy and electrotherapy is in the main extremely unpleasant and in part painful, hence successful Hypnotism has met with growing disfavor I believe, and is by many regarded as dangerous to children, if for no other reason than its being a form of induced hysteria At the nervous clinic of the Northwestern University Medical School, hypnotism has been resorted to with success in a few very [illegible] of habit spasm My experience to [illegible] of convictions for or against this

After a cure in isolati

should not be returned to their old surroundings too soon. They should be given plenty of time in which to forget all the circumstances attending their former disabilities

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THE TREATMENT OF SIMPLE CHRONIC GLAUCOMA BY MIOTICS *

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It is the object of this paper to extol the action of miotics in the treatment of simple chronic or non-inflammatory glaucoma, to call attention to the very satisfactory results which attend the use of these drugs in this class of cases, and to urge their more intelligent and persistent administration, for while eserin and pilocarpin have been employed by ophthalmologists for 25 years or more for their miotic action in glaucoma, they have always been regarded as of secondary value to some form of operative procedure, being used either as adjuvants to iridectomy, both before and after operation, for the purpose of decreasing intraocular tension, or as substitutes for operation in advanced cases where iridectomy is contraindicated

By most authorities operation has been and is still considered to be the only cure for glaucoma, and while the results of operation are known to be less favorable in simple chronic glaucoma than those obtained in other forms of this disease, yet it is almost universally conceded that even in this type iridectomy gives a better chance for retaining vision than any other form of treatment I use the term "universally conceded," for I believe that the profession generally has adopted the views of such investigators as Nettleship, Bull, Priestley Smith, Knapp, Collins and Gruening, all of whom recommend early operation in the simple chronic as well as the congestive forms of glaucoma

Although this advice has been accepted by the majority, it is probable that many hesitate to follow the counsel of these distinguished observers in all instances and prefer to treat many of their cases of simple chronic glaucoma in a less radical manner When the average ophthalmologist considers the very slow progress of the disease and weighs the chances which iridectomy gives for retaining vision with the positive disadvantages which so frequently accompany the operation, and when he considers the liability of error in confusing glaucoma with optic atrophy, with excavation, and the needless risk of blindness to which patients with this latter disease would be subjected by iridectomy, it is not remarkable that the day of operation is often postponed and that recourse is had to measures which, though they may be regarded as being of less value, are never harmful

Is there positive evidence, however, that miotics are of less value than iridectomy in the treatment of chronic glaucoma? Have statistics ever been compiled of groups of cases, the one treated by miotics and the other by operation, which prove this assertion and indicate the superiority of iridectomy over these drugs? So far as I am aware no statistical study of any large series of cases of chronic glaucoma treated with miotics has ever been made, with the exception of that compiled by Dr William Zentmayer and myself in 1895 At that time the histories of 167 cases of chronic glaucoma were collected from the services of the late Dr William F Norris and Dr C A Oliver at the Wills Eye Hospital, and from these records deductions were drawn which were thought to be fairly conclusive regarding many phases of the disease, including the results of different methods of treatment Many of these cases had been observed over a very protracted period, and while the miotics which were employed were doubtless but indifferently administered in many instances, and carelessly applied, so that the full advantage which might have been gained from this form of treatment was not obtained in any of the cases, nevertheless an opportunity was afforded of comparing the prolonged action of these drugs with the results of iridectomy, which no other series of observations gives For the conclusions of Nettleship and those of the other authorities already referred to were based merely on the results of iridectomy, and are of value only as they indicate the manner in which operative procedure influences the progress of glaucoma, and do not present any basis of comparison with cases treated by miotics

As a result of our studies Dr Zentmayer and I concluded that "the effect of the administration of eserin and of the performance of iridectomy in checking the course of the disease is proportionately the same in the treatment of simple chronic glaucoma As operative procedures are always to be deprecated when other means are equally valuable, eserin should be employed in all cases of the disease If at the end of a month the extent of the field has diminished, iridectomy should be resorted to, as there will be nothing further to expect from the action of the drug If at the end of that time, however, an improvement is noted, as evidenced by a study of the field, the drug should be continued, as there is reason to expect that a beneficial action will be exerted for ten months on the extent of the field and fifteen months on the visual acuity After iridectomy is performed there is ground to believe that the course of the disease will be checked for a period of eighteen months in 50 per cent of the cases

"Eserin is powerless in 20 per cent, iridectomy in 10 per cent of the cases So that 10 per cent of all cases of simple glaucoma will not be benefited despite all therapeutic measures that may be employed Both iridectomy and eserin exert a greater influence over central vision than they do on the extent of the visual field This is seen in the greater percentage of cases in which vision was improved, as well as in the length of time in which it remained conserved

"The intraocular tension was more benefited by both methods of treatment than any of the other symptoms, for eserin lessened its degree in all but 20 per cent and iridectomy in all but 10 per cent of the cases"[1]

In estimating the value of these conclusions it should be borne in mind that they were drawn from a study of dispensary patients and that many of these were under treatment at a time when the manner of administering miotics to the best advantage was not thoroughly understood From observations which I have made on a very considerable number of cases, both in private and dispensary service, since the publication of the report, ten years ago, I am convinced that were it possible to compare an equal number of cases which had been subjected to the action of miotics properly administered over a similar period, the comparative merits of miotics and iridectomy would be shown to be far greater in favor of the former Unfortunately, I am not in a position to make such a study, or to state in exact terms what such ratio of comparison would be, for I have not as yet at

* Read in the Section on Ophthalmology of the American Medical Association at the Fifty seventh Annual Session 1906

1 Wills Eye Hospital reports vol. I. No 1

my command a sufficiently large number of cases which have been followed over a long enough term of years The difficulty of collecting a large number of cases of chronic simple glaucoma is very great The disease is comparatively uncommon, and since as a rule it affects those who are advanced in years, death often ensues before the observation can be extended over many years, even when the subjects of the disease remain constant in their attendance on one surgeon Though lacking statistical evidence to support them, I venture to express my convictions at this time, for I believe that recent utterances by ophthalmologists of note have tended to discourage the use of miotics, so that many who are beginning their ophthalmologic career and others who have but little opportunity for clinical observation have come to regard them as altogether valueless When no less an authority than Berry asserts that "altogether I believe miotics to be practically useless in chronic glaucoma," and such a careful observer as Cheyney states that in chronic glaucoma "loss of sight without operation is of course, inevitable," it seems time if one has been assured of the value of miotics to state his convictions and to give whatever testimony he can in their favor

To elucidate the subject, I consider the subject under the following heads 1 Beginning cases 2 Advanced cases 3 Pronounced glaucoma in one eye, the other being unaffected, or with only a glaucomatous tendency

I. BEGINNING CASES

I designate as beginning cases those which have possessed the tendency to glaucoma for a number of months or years and are now manifesting some positive signs of the disease, the tension being, perhaps, more or less elevated, the cupping demonstrable, or some restriction or scotoma having appeared in the visual field.

It is at this stage that the authorities and the books say operate, for they contend that the best results follow operations which are done at this time, asserting that the longer operation is delayed after the diagnosis of chronic glaucoma is once confirmed the less favorable will be the results They acknowledge that the operation will not control the glacomatous process in all cases and that in some it will accelerate the course of the disease They do not ignore that even in the most favorable cases there will be certain optical disadvantages resulting from the iridectomy, such as astigmatism and aberration, that the transparency of the lens will suffer in not a small proportion of cases, and that some eyes will be lost from infection Despite all this, the advocates of iridectomy say operate, for they claim that there is no other alternative, that there is no other treatment, that eserin can not be relied on, that it can not control the disease and that blindness is inevitable

These are the expressed views of some of the ablest ophthalmologists in the world, and they no doubt express their convictions, but do these surgeons or does any member of this section strenuously and conscientiously follow this advice? Is iridectomy insisted on and urged in every case of chronic glaucoma when once the diagnosis is confirmed? I am convinced that it is not, and that, though operation is advised in many cases, it is done in such a half-hearted manner and the prognosis is guarded with such an unfavorable outlook that the patient would be rash indeed who would decide to submit his eye to it Under such circumstances the operation is frequently refused and the ophthalmologist, with the conviction that he has done his duty and has put his conscience at rest by the advice which he has given, is now ready to do the next best thing and orders miotics Expecting nothing from these drugs, he employs them but indifferently and without method, and as a consequence observes the gradual deterioration of sight Another surgeon, though equally pessimistic, but more conscientious, employs eserin and pilocarpin more persistently and methodically, and is surprised at the long maintenance of vision He then begins to question his diagnosis and consider if, after all, the case is not one of optic atrophy with excavation, and not a true glaucoma, though the increasing hardness of the eye serves to convince him more and more that there has been no error and that the case is surely one of glaucoma I believe that there is scarcely one who has not had this experience and who has not had the conviction forced on him that after all perhaps it was just as well that such patients refused operation

But it will be said, Who can tell that any given case will progress so favorably? Such experiences are exceptional, and the majority so treated will, after a few months, develop subacute symptoms at least, and loss of sight will be precipitated It has been my experience that if the disease is of a pure chronic type in the beginning, in the great majority of cases it will remain so to the end, provided miotics are continuously employed On the other hand, I have observed that if there are any congestive symptoms in the initial stages or shortly thereafter, miotics are powerless to check the disease and early operation is indicated From a therapeutic standpoint, at least, I would insist, therefore, on the necessity of a separation of all cases of glaucoma into two types, the one congestive, which, despite the use of miotics, presents symptoms of irritation and inflammation in even the earliest stages, and in which early iridectomy is indicated, and the other the non-congestive or chronic, which may continue for many years practically stationary under the employment of miotics

I have had under my private care at least four cases for twelve years, and for ten years twice that number, and others for lesser periods, on whom iridectomy was not performed, who still retain full vision though somewhat restricted fields, and it is probable from the progress of the disease that the deterioration in vision will not be much more pronounced at the end of another ten years As an example of this type I cite the following history

History—Woman, aged 62, consulted me first in June, 1897, for gradually failing vision The eyes had never been inflamed or painful, and the glasses which she had worn both for near and far, had always given satisfaction until recently The patient was strong and healthy, though gouty, but for several years previous to consultation had been under a severe mental strain She had always been a sufferer from nasal catarrh and had not the sense of smell for several years

Examination—Examination showed the eyes to be quiet, the cornea being clear and the conjunctiva healthy The anterior chamber of both eyes was shallow the pupils were 2 5 mm in size, reacting well to light and accommodation stimuli Both optic nerves were hyperemic, of a dirty dull red gray tint and their excavations extended temporally to a broad scleral ring Arterial pulsation was absent, but the veins pulsated on the disc. The sclera in both eyes felt rigid but tension was not apparently increased

With + S 1 75 D with + C. 0 50 D ax. 70 O D V equaled 5/5
With + S 1 25 D with + C 0 75 D ax 60 O S V equaled 5/5

The field of vision in both eyes was normal both for form and color and there were no scotomata

Treatment—Eserin gr 1 was at [illegible] the strength gradually increased as [illegible] eles grew tolerant of its action [illegible] were also selected and careful [illegible]

the restricted use of the eyes at near work. Alteratives and tonics were prescribed and the regimen of the patient's life carefully outlined This plan of treatment has been carefully and conscientiously followed for eight years, the patient submitting herself every two or three months for observation and any necessary change of treatment

Results—Central vision still remains normal, though the visual fields have suffered a slight restriction nasally for both form and color There are no scotomata, either by the ordinary perimeter tests or by the method of Bjerrum Tension, too, has become perceptibly increased in both eyes and the excavations on the head of the nerves are more distinctly glaucomatous and the nerves are paler The refraction has changed, the last test, 428 06, indicating that it required + S 2 D ⊂ + C 0 75 D ax. 120° to bring the vision to normal in the right eye and + S 2 D ⊂ + C 0 12 D ax 80° to bring the vision to normal in the left eye The cornea has continued clear

The eserin has been well tolerated, and having always been prepared with care and in fresh solution, and boracic acid washes used persistently in conjunction with it, all irritation of the conjunctiva has been avoided The salicylate of eserin is now being employed in a solution of gr ii to the ounce

It is true that the disease has progressed in this case despite the constant use of miotics and diligent care directed to every source which could influence the ocular condition, but the progress has been so slow that in all fairness it may be claimed that the disease has been at least controlled All here can doubtless quote similar experiences, and in such instances has there been a regret in the minds of any that iridectomy was not resorted to? Before closing this paragraph, however, it should be made clear that if the disease at any time assumes an acute or subacute type iridectomy should at once be performed, and furthermore that if it is impossible to keep the patient constantly under observation, or if miotics can not be persistently and continuously employed operation should be resorted to also

II ADVANCED CASES

Under this class is considered the not uncommon type where vision in one or both eyes has been seriously compromised by the marked restriction of the visual field, either peripherally by cutting, or centrally by scotoma All advocates of iridectomy caution about the danger of operating under such circumstances, as it has been a common experience that total blindness has not rarely followed surgical interference Cases of this type have usually been regarded as hopeless, and blindness, within a few months at best, has been considered to be inevitable That miotics may be of great service, even in this type, and may accomplish truly wonderful results, is attested by the following case, which I have had under continuous observation since April, 1893

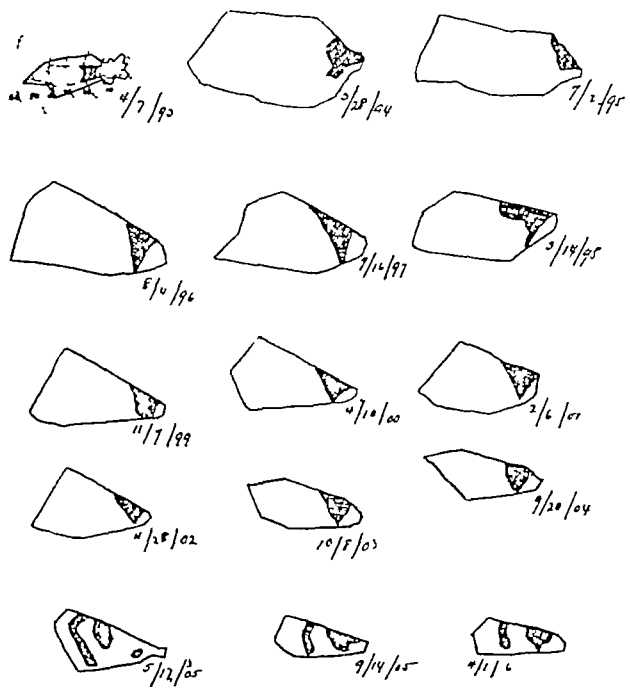
History—Patient, a man aged 48, was practically blind in the right eye, while the vision in the left was reduced to but a segment of the visual field The cause of the failure in vision was ascertained to be chronic simple glaucoma, which had followed an attack of grip three years previously

Examination—Both eyes were hard, there being no difficulty in estimating the degree of the hardness in both eyes as at least + 2 The anterior chambers were very shallow, the scleral vessels were dilated and engorged and the nerves were deeply excavated The general condition was somewhat impoverished, digestion was poor and the nervous force of the individual negative Nasal catarrh was complained of, and there were repated attacks of rhinitis with sinus involvement, the conjunctiva, however, was clear Vision in the right eye equaled the perception of hand movements in the temporal field, in the left eye central vision was normal, but as shown in the accompanying diagram, the field of vision was much restricted

Treatment—Iridectomy being apparently out of the question, on account of the marked limitation of the field, treatment with miotics was inaugurated, though it was felt that but two or three months would suffice to obliterate the small portion of the visual field which remained

It should be stated in this connection that until this time, although the patient had been under continuous medical care, eserin had never been prescribed, but after the operation was refused, his treatment had consisted in tonics, boric acid washes and a change of glasses Under this plan of treatment, the loss in sight had been very rapid and the patient had estimated that should the left eye deteriorate as rapidly as it had during the few weeks before he came to me for advice, blindness would ensue in a month or six weeks

The salicylate of eserin was accordingly prescribed, in a gr ss to the ounce dose, conjunctival irritation being guarded against by the treatment which will be described later Tonics were continued Attention was directed to the nasal condition. Tobacco and alcohol were stopped, the use of the eyes at near work prohibited, and every effort was made to ameliorate the condition of the general health, and to gain a maximum effect from the miotics In a few weeks, the eserin was increased to gr i to the ounce, and a similar increase



The fields of vision in the left eye of a case of chronic glaucoma showing gradual peripheral restriction and the extension of scotoma.

was made each month until in four months a gr iv to the ounce solution of the drug was being employed

Results—The arrest of the glaucomatous process under this plan of treatment was most remarkable, for, as may be seen in Figure 1, the field became less restricted for a time and central vision remained normal At the end of six months nitrate of pilocarpin in twice the strength was substituted for the eserin, and during the past thirteen years there has never been a day that either eserin or pilocarpin has not been instilled three or four times daily Slight conjunctival irritation has arisen at times during this interval, but has always readily yielded to treatment Until three months ago there was full central visual acuity, though as a study of Figure 1 will show, as the years went by the field of vision became more and more contracted and the paracentral scotoma has grown steadily larger Three months ago, after a rather prolonged attack of dysentery, there were several recurring attacks of blindness in the left eye, which persisted for five to ten minutes These were apparently caused by a temporary interruption in the retinal blood supply, and though they

were controlled by strychnia injections into the temple, and nitroglycerin internally, central vision has not arisen to more than 5/7 ½, and the field of vision has remained still more contracted. To day, thirteen years after the patient came under my observation, vision is 5/7 ½, and the field is as indicated by the lowest chart in Figure 1

That this truly remarkable result has been achieved by the use of the miotics I believe there can be no doubt The very great increase in intraocular tension, the shallow chamber and the deep excavation render the diagnosis of glaucoma incontrovertible, while the rapid prevention of the loss in vision in both eyes which was occurring prior to the administration of the eserin indicates the power of this remedy in chronic glaucoma

III PRONOUNCED GLAUCOMA IN ONE EYE, THE OTHER BEING UNAFFECTED, OR WITH ONLY A GLAUCOMATOUS TENDENCY

Glaucoma is essentially a binocular disease, though a very long period may elapse before both eyes are affected It not infrequently happens, therefore, that the ophthalmologist is called on to treat one eye in an advanced stage of glaucoma, while its fellow is either normal or presents changes which indicate in a general way merely a glaucomatous tendency Experience has shown that when iridectomy is performed on the most affected eye, in glaucomas of a congestive type, that a glaucomatous outbreak is frequently precipitated in the other eye On this account authorities advise the performance of iridectomy on the fellow eye as soon as the wound in the operated eye has healed, and believe that this procedure should be preferred even in cases of chronic glaucoma, where there are indications that if it is not already the seat of glaucoma it is liable to become so

While my experience leads me to agree heartily with this advice in the treatment of all forms of congestive glaucoma, I do not believe that the same ruling should be made applicable to cases of chronic glaucoma for I have never seen an acute attack precipitated in the fellow eye by an iridectomy on an eye which was the seat of a non-congestive type of glaucoma In the cases of chronic simple glaucoma which are occasionally met with where a glaucoma of a congestive type, despite the continuous use of eserin, has developed from a chronic simple glaucoma, pure and simple, iridectomy is, of course, indicated and should be performed, but even under such conditions I have never seen an outbreak follow in the fellow eye when it had been properly guarded by miotics It goes without saying, almost, that in event of operation in this class of cases the maximum effect of a miotic should be obtained some time before the operation and that the administration of the drug should be continued in the fellow eye, even if it manifest no symptoms of glaucoma, as long as the patient lives

The following history illustrates the progress of cases of this type

History—Miss H, aged 64, consulted me Nov 22, 1904 Vision in the left eye had been poor for five years, but the deterioration had been much more marked the six months previous to consultation. There was a history of recurrent head pain of several years' standing, but unassociated with attacks of dimness of vision The general health had always been good

Examination—Examination showed the right eye to be normal, but the left eye was found to be the seat of a subacute glaucoma, the nerve being atrophic with a deep glaucomatous excavation Tension equalled + 1 The field in the right eye was normal, but was greatly diminished in extent in the left With + S 0 50 D ⌒ + C 0 50 D ax 170°, vision in the right eye was brought to normal, in the left with + S 0 50 D ⌒ — C 2 D ax. 30°, it equalled but 5/35

Treatment—A solution of eserin gr 125 to the ounce was prescribed, this strength being rapidly increased until the pupil was brought to almost pin point contraction. Despite this treatment, however, the field still further deteriorated and vision sank to 3/60 An iridectomy was accordingly performed on the left eye, the right being kept under the full influence of eserin, both before and after operation.

Results—The progress of the case since the iridectomy was performed has been favorable, vision in the operated eye remaining about the same (2/60), while that in the right eye is still normal At this time, two and one half years after the operation, the right eye still remains free from any pronounced signs of glaucoma, no pathologic excavation having appeared and tension being apparently normal The anterior chamber, however, is somewhat shallow Eserin has been persisted in continuously and the strength of the drug gradually increased, so that two drops of a gr i. to the ounce solution are being employed in the right eye at 8 a. m and 10 p m, and two drops of a gr ss to the ounce solution at noon and 6 p m

The explanation of the favorable action of miotics in chronic glaucoma resides not only in their power to enlarge the angle of the anterior chamber by the thinning of the iris consequent on the contraction of the pupil, but also, as Wahlfors has suggested, in their action on the choroidal circulation, for when the ciliary muscle is stimulated the choroid is likewise influenced through the contraction of its tensor, and the muscular network of the membrane set in action, the pressure on the sclera relaxed, the mouths of the venæ vorticosæ opened, the amount of lymph within the eye lessened and tension made to fall

Now chronic glaucoma is essentially, in the early stages at least, a disease of the posterior segment of the eye, its first symptoms are observable in the choroid and about the head of the nerve, and a long period may elapse before the anterior segment becomes appreciably affected By reason of the double action just referred to, miotics are, therefore, peculiarly valuable in chronic glaucoma, while iridectomy, affecting, as it does, the lymph channels of the anterior segment of the eye alone, is comparatively useless In acute glaucoma, on the other hand, the reverse is true, for in this type of cases the congestion of the anterior segment of the eyeball is present from the first, and iridectomy, by relieving this and by opening a permanent passage for the escape of lymph, is much to be preferred to miotics, which accomplish this but imperfectly and transiently

In order to gain the full benefit from miotics in the treatment of glaucoma, it is necessary that they should be properly administered It should be kept constantly in mind that glaucoma is a steadily progressing process and that as the eyes, after a time, become habituated to the use of miotics their strength should be gradually increased It must be remembered, also, that the effects of eserin and pilocarpin persist for two or three hours only, so that the dose should be repeated at the end of this period if their action over the pupil is to be constantly maintained Finally, the dosage and the irritation occasioned by miotics should be taken into account

Undoubtedly the objections to the use of miotics when they were first introduced, and which still remain in some quarters, were dependent on the employment of too strong solutions When used in this way, cramp of the ciliary muscle, with resultant headache and other reflex symptoms, is often so violent that patients can not be induced to continue these remedies while the occasional occurrence of hemorrhages into the anterior chamber and retina, which have been noted by some observers has deterred many ophthalmologists from employing them

It has only been within comparatively recent years that the profession has understood the art of commencing with small doses and gradually increasing them until the desired effect is attained, and then maintaining the action by still further, but less frequent, increase in the strength of the solution employed. As was originally suggested by Sir William Bowman, the initial dose of eserin should be weak. An excellent initial dose is gr. 1 to the ounce, the strength being gradually increased, so that at the end of a year the patient should be using gr. 1 to the ounce, at the end of the second year gr. ii and at the end of the third year gr. iii to the ounce solution. I have never found a stronger dose than this necessary, *this strength sufficing to maintain the pupils at the desired point* of almost pin-point contraction. Pilocarpin should be employed in twice the strength of eserin and is increased in solutions of equal proportions.

Wicherkiewicz has recently lauded a solution of eserin, pilocarpin and cocain in which he claims that the pilocarpin and eserin balance the mydriatic action of the cocain, while the miotics maintain their power over the tension. The formula he employs is as follows:

Physostigminæ sulphatis	gr. 1/7	01
Pilocarpinæ hydrochloridis	gr. iii	2
Cocainæ hydrochloridis	gr. iss	1
Aquæ dest. q. s. ad	ʒiiss	10

The solution is employed at night only in chronic cases, but repeatedly in acute glaucoma. I have employed this combination several times daily in a number of cases, and have found it to act advantageously.

Gentle massage of the eyeball is of decided advantage and should be practiced several times each day, for five minutes at a time. In addition to these local measures, the patient should be instructed as to the number of hours daily the eyes should be used in near vision. All near work should, of course, be much restricted, and should be carried on only under the most favorable conditions regarding illumination, posture of the patient, etc.

Proper lenses should be adjusted to the eyes, both for near and far use and the refraction should be frequently estimated and any error corrected, changes in the refraction being rendered frequent by the action of the miotics on the ciliary muscle.

As pointed out by Theobald, the astigmatism will often be found to be against the rule in chronic glaucoma, *though I believe that this is rather the result* of the stretching of the posterior part of the eye than, as Theobald states, the cause of the glaucoma.

A large number of hours daily should be spent in the open air, and, as the disease is undoubtedly frequently the ocular expression of chronic rheumatism and gout, the patient should be urged to spend the greater part of the year under the most favorable climatic conditions to combat that diathesis. The skin should be kept active, the gastrointestinal apparatus regulated, and any local source of inflammation or irritation, neighboring on the eyes, such as inflammation in the nasal passages or their accessory sinuses, should be allayed. Particular care should be given to the peripheral circulation, nitroglycerin and strophanthus being often of value. Zimmerman thinks that adonis vernalis is especially useful in chronic cases. Strychnia should be administered, not only on account of its action on the circulation, but also because of its influence on the optic nerve. On account of their antirheumatic properties, *the salicylates* are of decided value and should be frequently administered for continued periods.

Although miotics do tend to provoke a certain amount of conjunctival irritation, the excessive reaction which sometimes follows their employment is often mycotic, *just as atropin irritation is mycotic, and can be* prevented by care in preparing the solutions, while the continuous use of cleansing and sterile lotions in conjunction with the miotics will usually allay whatever slight irritation they occasion.

The miotics which are best adapted to control intraocular tension are the salicylate of eserin and the nitrate of pilocarpin. As pointed out by Landolt, this salt of eserin is more persistent in its effects and less changeable in solution than other salts of the drug, and is less irritating *to the conjunctiva*. Eserin, however, in addition to its action on the pupil, stimulates the ciliary muscle, and in cases where there is ciliary congestion, as in acute and subacute glaucoma, its use should be conjoined with cocain, which neutralizes its contracting action on the blood vessels and diminishes the sensibility of the ciliary nerves. Pilocarpin may be substituted in such cases, as it has a much weaker action on the ciliary muscle than eserin, though its action on the pupil is also slighter, so that it must be used in twice the strength of eserin to gain the same amount of contraction.

It should be remembered that a moderate amount of pupillary contraction avails but little, and it should be the aim of the surgeon to keep the pupil continually contracted almost *ad maximum*. I prescribe a solution of pilocarpin for use during the day, and one of eserin of twice the strength at bedtime, thereby avoiding the blurring of vision which is occasioned by the action of the eserin on the ciliary muscle during the day, while the eye receives *the greatest effect of the drug during the* eight hours or more which elapse between the instillations of the drops during the night.

At times, though very exceptionally, a mydriatic effect will follow the instillation of pilocarpin. This has been determined by Lilienfeld[2] to be due to an impurity in the form of jaborin, an isomer of pilocarpin. I have noted this occurrence in one case, but the eyes suffered no injury, intraocular tension not being appreciably elevated.

[FOR THE DISCUSSION SEE PAGE 726]

THE CARE AND TREATMENT OF INEBRIATES *

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The therapeusis of inebriety turns like that of any other morbid condition on the definition of inebriety. In such conditions the relative element is largely involved, not merely as to quantity drunk, but also as to the character of the individual affected. Drunkenness *is an old condition and made its appearance early in evolution among the social animals*. Bees, wasps and ants become intoxicated on fruit ferments and recover from the intoxication with apparently the same experience of exhaustion as the human being. There is hardly a race which has not, independently of all others, obtained a method of intoxication, varying from the use of fungi, as is the case with certain Siberian aborigines, to that of distilled liquors.

2. *Centralbl. f. prakt. Augenhk.*, May and June 1901.

* Read in the Section on Hygiene and Sanitary Science at the Fifty-seventh Annual Session of the American Medical Association, Boston, 1906.

Distilled liquors were at first comparatively rare as a means of intoxication, and under the title of essences were sold almost entirely by druggists With the development of the gin industry in the eighteenth century, the use of strong alcoholic drinks was rapidly popularized. Crude methods of distilling, however, had early been employed in rural distilleries and the percentage of alcohol abuse was through this, as it is in Italy to-day, much larger among the rural than among the urban population Practically, the eighteenth century marks the abuse of alcohol in the urban population The early object of using intoxicants was not to become merely stimulated, but to get drunk. Drunkenness implied no necessary stigma Indeed, it was gravely debated in the seventeenth century whether it were not beneficial to get drunk at least once a month The early claim for gin, which was the first great urban distilled liquor introduced to the English-speaking population, was that one could get drunk for 4 cents The influence of this practice led to a certain belief in the manliness and even in the beneficial influence of drunkenness Like other defective beings, the inebriate retains too much of this spirit, and at times has reversed it, ascribing all his deliquencies, like the one-sided sociologist, to alcohol It is this element which furnishes one great obstacle to treatment and which necessitates classification of inebriates as a guide to management and therapy Inebriates may be divided into congenital defectives, weak-willed instabilities, accidental inebriates, hysteric inebriates, periodical inebriates and inebriates with an acquired nervous constitution

The congenital types are very frequently of the pseudo-criminal variety who indulge in alcohol as a means of shirking responsibility or of securing support and sympathy The alcohol is simply an expression of moral defect and a dodge to secure sympathy Such cases are the opprobrium of all treatment, like the congenital criminal type generally These individuals are incapable of acquiring the secondary ego which admits the rights of others in property, happiness and opinion

The weak-willed inebriates, like the weak-willed criminals, depend to a considerable degree on environment, which, in part, is constituted by the general condition of instability at the time he is subjected to temptation In many of these weak-willed cases a general physical exhaustion accompanied by irritability underlies the yielding to temptation These people are generally what is called lithemic and suffer from the alternate buoyancy and depression accompanying lithemia Many of them also display a high degree of urinary acidity which culminates just before they yield to an intoxication As alcohol very frequently in these cases restrains the eliminating power of the kidney and the poison-destroying power of the liver, it increases the factors which lead to its abuse Furthermore, diet which increases the urinary acidity increases the craving for alcohol In these cases, moreover, there is a tendency to the dreamful, exhausting sleep states which prevent proper recuperation from fatigue and increase the general nerve irritability and consequently decrease the balance constituting will power These are the cases which so often mislead their friends and the sanitarium officials because of the apparent improvement under the hygiene of the sanitarium, which hygiene requires too much of psychic effort for the weak-willed instabile individual to maintain after leaving the institution The trouble with this class of cases is that the periods of treatment are too brief and the medical supervision too short to restore the proper balance, constituting will

The third type includes inebriates made such by a great moral shock, who have previously been markedly strong-willed, but in whom the moral shock has upset the physical and intellectual balance constituting will Here, as in the weak-willed instabilities, the tone of the will requires restoration and the patient, furthermore, needs the physical buoyancy overcoming mental and physical depression The acid states and indicanuria are peculiarly present in this class of cases, liver, kidneys, skin and lungs need attention, as well as the general mental and nerve tone Moral discipline is also very essential and requires peculiarly the application of the French principle that for every evil there is always compensation There is in most of these cases an underlying depressed mental tone which needs special attention, since influence can thus be best exerted in restoring the normal tone of the will Very frequently there is, as in melancholia, a paralysis of the social factors, causing the subject to disregard the claims of his family or of those dependent on him A continuous appeal to these claims is often peculiarly needed Here medical care of the rest-cure variety comes into play In none of the types described can the promise of the patient to abstain from alcohol be depended on wholly, nor can his promise to subject himself to dietetic and other therapy be relied on

The will in all three cases is at the mercy of any impulse which does not present to the subject the appearance of the violation of a contract. The various signings of the pledge, etc., have not acted in the direction of improving will power, but in the direction of counter suggestion to impulses That such suggestion is potent at times under very favorable conditions there can be no doubt.

Hysteric inebriates are closely allied in type to the weak-willed inebriate, except that there is a deeper nerve defect The hysteric inebriate finds a satisfaction, even voluptuous pleasure, in shocking the moral sense of his or her friends and in the notoriety thereby occasioned This is peculiarly the case with the female "rounders," who in the English-speaking countries have, like Jane Cakebread, been arrested so many times for drunkenness These cases are the more intractable as the appetite for alcohol replaces the sexual appetite Many of them prefer the shock given their friends and the general public by intoxication to sexual indulgence Individuals of this class are frequently found among young girls about the period of puberty There is generally in these cases congenital defect which has interfered with the development of the secondary ego

The periodical inebriate, strictly speaking, is not an inebriate at all as a rule There is a widespread distinction between the true periodical inebriate or the dipsomaniac and the inebriate proper An alcoholic patient, as Legrain remarks, becomes insane because he drinks, a dipsomaniac is insane before he commences to drink Dipsomania may be complicated by alcoholic symptoms, but alcoholism never leads to true dipsomania Alcohol is an intoxication which has as its cause alcohol, while dipsomania has its origin in a congenital defective condition and alcohol is a secondary factor which may be replaced by any other intoxicant leaving the syndrome all its psychologic characters Dipsomania proceeds in paroxysmal attacks and the appetite for intoxicants is absent between the attacks The development of alcoholism depends directly on the greater or less degree of

consumption of alcohol. Dipsomania, therefore, is a periodical insanity characterized by irresistible craving for alcohol or narcotics during certain periods preceded and succeeded by nervous and mental change in the individual affected, intermingled with periods of sobriety. The alcoholic element is a mere manifestation determined at the outset of the attacks. The dipsomaniac would be insane during the drinking periods even if no alcohol were used. The condition, therefore, is akin to epilepsy. Dipsomania may be complicated by symptoms of alcoholism, depression, exhaustion, tremor, delusion, oppressive dreams approaching to somnambulism, hallucinations, etc. The treatment of dipsomania turns on the discovery of the conditions preliminary to the drinking period and the determination whether this can be prevented by dietetic and therapeutic methods, as is done in cases of epilepsy. The individual during the drinking periods is not legally responsible, since free determination of the will is impaired, not merely by the alcohol but by the underlying nerve state which in no particular is due to alcohol, albeit it may be aggravated thereby.

Underlying many complicated neuroses, some of which belong to the protracted neurasthenias, some to the true hysterical constitution and some to what may be called the paranoiac neurosis, are states produced by traumatism, by insulation, by electric shocks from live wires, by nervous states after the essential fevers, by conditions resulting from uterine and ovarian strain and defect and from severe strains in business with consequent anxieties.

In 23 cases in which degenerative shocks were charged to alcoholic parentage, both father and mother were alcoholics. The fathers in four cases had been temperate, industrious and affectionate ere being sunstruck, following this came periods of irritability, excessive drinking and spendthriftness. The mothers had remained free from the use of alcohol after the fathers' breakdown, but were nervously exhausted from the strain, one becoming depressed during pregnancy was given gin for the depression and became an inebriate after delivery. In three other cases dysmenorrhea developed during the nervous strain. The popular prescription for this, gin, was given with the result of producing inebriety. In two of ten cases where injury to the father had like results on both father and mother, dysmenorrhea resulted after a railroad accident and gin drinking to relieve this followed and became a habit. The fathers' nervous system broke down under the strain and they both became inebriates. In two other cases nervous exhaustion from typhoid fever produced the same outcome, inebriety, in father and mother. In the remaining cases inebriety was the product of nerve exhaustion after various protracted infections. The influence of local sources of nerve exhaustion, like eyestrain, nose and throat, ear and other strains and from the reproductive organs, must be here included. As with the insane, every source of nerve irritation requires attention in the inebriate and removal whether the same be eyestrain, reproductive organ strain, nose and throat strain or strain seated elsewhere in the body. In the management of this class of inebriates the underlying nerve state has to be taken into account and the fact that this nerve state peculiarly deranges metabolism and elimination and thereby acts in a vicious circle. While much may be done for the neurasthenic and hysteric types the paranoiac type is practically hopeless. Indeed it often presents periodic symptoms leading to a diagnosis of dipsomania or inebriety, which symptoms disappear in the insane asylums or in the penitentiary, leaving behind a clearly developed paranoia. In these cases, however, there is sometimes a good mental background which keeps the paranoiac tendencies in check and which may be aided by removing all sources of irritation. Unfortunately, however, strain tends to break down this mental background and the irritability of the condition predisposes to alcohol and at the same time the condition is peculiarly intolerant of alcohol. In all these types of cases protracted medical supervision is needed.

The management of inebriety, therefore, is management of a protracted disorder like typhoid, where any "specific" becomes an absurdity, since the patient, and not the disease, requires treatment. Strychnin is beneficial in nearly all nerve defects, because it enhances general circulation, gives tone to the heart and adds a certain buoyancy which offsets depression. For this reason strychnin and nux vomica have often been credited with curing inebriety. I prefer strychnin nitrate, 1/100 gr. to 1/50 gr., three times a day, either in solution or in pill. Other preparations useful occasionally are the hydrobromate of strychnin, 1/50 gr., and arsenate of strychnin, 1/100 gr. once or twice daily. Other good tonics for chronic alcoholism are the following:

℞	Tr. nucis vomicæ	f℥ss	2
	Acidi phosphorici dil.	℥i	4
	Aquæ chloroformi	℥i	30
	Aquæ dest., q. s. ad	℥vi	90
M.	Sig. A sixth part three times daily.		
℞	Tr. nucis vomicæ	℥iv	15
	Acidi nitrici dil.	℥v	20
	Fluidextracti leptandræ		
	Fluidextracti taraxaci	āā ℥vi	90
	Infusi quassiæ, q.s. ad	℥viii	240

M. Sig. Two teaspoonfuls in half a glass of water two or three times a day.

Mandragora is an old remedy for conditions of depression, and, as it undoubtedly adds a certain nerve-toning element to a decided eliminative tendency, there is no doubt but that at times it would prove beneficial in certain cases of inebriety. Its nerve-toning and resultant sedative process, as well as its eliminative action, however, are greatly overestimated. It has an action on the heart resembling that of digitalis, but has not quite the toning effect on the arteries as strophanthus, with which it has been allied. It was a great favorite with the Greek and Roman alienists, and their claims for it have been revived in St. Louis, the home of proprietary preparations. Like all the nervous exhaustion states, inebriety is accompanied by motor disturbance. The inebriate requires restful sleep. Combinations of sulphonal, of trional, of veronal and tetronal with old vegetable narcotics, like passiflora incarnata, hyoscyamus, conium, etc., are frequently beneficial for this purpose. The following is an excellent formula to produce sleep in these cases:

℞	Sulphonal	gr. xviii	1|16
	Fluidextracti conii	m. xviii	1|12
	Pulv. glycyrrhizæ, q. s.		

Ft. caps. No. vi.

Sig. Take two at 6 p. m., two at 8 p. m. and two at 10 p. m. The next night half this quantity will probably suffice.

Lupulin in 10 or 20 gr. doses taken at bedtime will often serve as an efficient hypnotic.

Balneotherapy, on account of the stimulus of the circulation, is peculiarly beneficial in all its varieties. Cold sponging, given in such a way as to reach the spinal and

pelvic nerves, exercises a beneficial influence in many directions In diet, red meats must be greatly reduced as well as the starches, while the fats should be increased Food, as a rule, should be given frequently in small quantities, but should be very nutritious Fresh acid fruits are of great value

In regard to moral treatment the inebriate must place himself under medical control for a prolonged period, otherwise results will not be permanent Separation from the family and from the previous environment in which the condition has developed is absolutely necessary in the vast majority of cases

Inebriety is so varied in form, so subtle in operation, so intricate in development and so complex in causation, that its treatment is no easy task No disease is more common and yet none so seldom recognized It is more widespread than tuberculosis, yet nearly every state in our Union is taking measures to prevent and to treat consumption, but, save among a few enlightened people, drunkenness is regarded purely as a vice, a folly or a sin People look on the drunkard as a good-for-nothing scapegrace The preacher denounces him as willingly guilty of heinous sin The judge punishes him as a criminal offender

If a man is found in the streets of Chicago, Boston or almost any city in this country suffering from apoplexy, carbolic acid poisoning or "rat" poisoning, he is tenderly lifted into an ambulance and hurried to some hospital where he can be properly treated If, on the other hand, a man is found unconscious from alcohol poisoning, the police pound him on the soles of his feet, endeavoring to wake him up, pitch him into a patrol wagon and throw him in a cell at the police station, from which he is afterward brought before a police magistrate and fined for committing a crime This might, and does, occur daily, not only with mild inebriates, but with dipsomaniacs Whatever their inherited tendencies, whatever their original weakness of will, whatever their inborn deficiency of moral control, whatever their natural susceptibility to alcohol, contumely and reproach, pains and penalties have been the only means which have been generally employed in the treatment of inebriates

Dr William Lee Howard, in "The Perverts," has so well expressed the truth I quote his remarks

> The public gazes at the club footed child, or the deformed adult, and utters a sigh of sympathy or an expression of regret that the parents or friends have allowed the sufferer to go uncured, the deformity uncorrected The child whose twitchings are the symptoms of St Vitus dance is the cynosure of its playmates, and often the victim of their ignorant ridicule The child's distressing uneasiness and odd muscular movements, however, are recognized as the effects of disease and the social attitude of young and old is adapted to this recognition Does the public ever realize that any group of the cells which make up the human body are liable to be distorted, undeveloped or misplaced during their formative period? That, while we pity the man with the deformed bones, and appreciate the fact that the deformity is due to no fault of his conduct, the man who was born with an analogous psychic defect is shunned, ostracised, and meets with social deringolade? It is the same old story The world is ever too eager to censure what it does not understand What is objective it accepts, what is subjective it ignores or ridicules
>
> With its knowledge of modern corrective surgery, the world blames the parents who allow their children to grow up deformed, rightly holding them responsible for not having had the defect remedied But if the child grows up with some defect in its controlling centers, if the nervous system is a little unbalanced, the neglect and ignorance of the parents increase the instability, and the result in the adult is some form of impulsiveness For the objective signs of this impulsiveness the helpless one is thrust aside, and the real offenders—the parents—meet with the sympathy of the world.
>
> If this symptom of a nervous affection exists in the man of ordinary intellect, if this man periodically demonstrates his restlessness by resorting to alcohol to relieve his horrible feelings, it is called by the unthinking masses vicious drunkenness This condition—the disease, inebriety, or its rabid form, dipsomania—rarely prevails in the man of ordinary mental powers
>
> The psychic conditions producing the unreasonable passion to consume enormous quantities of alcohol, morphin and allied drugs, is as distinct an affection as is the physical epilepsy seen daily on our streets

I am charitable enough to believe however, that the general public is only unjust and cruel through ignorance

It was not so very long ago that an insane person was regarded as one possessed of the devil Persons of unsound mind were starved, beaten and exposed to the cold when, if the patient survived this punishment, often of many days' duration he was considered to be cured In other cases these individuals probably "died cured"

All drugs, nostrums, and so-called cures are deficient in nerve restoration and moral renovation Drunkenness is at once a moral and a physical evil While we must look to the will, however weakened, of the inebriate, for an effectual and lasting cure, his physical system must be strengthened his diseased condition of body treated, and his craving for alcohol overcome if possible To aid in the accomplishment of such desirable ends, we need to employ various medicinal remedies, hygienic measures modifications of diet, entertainment, moral influence, suggestion, etc These means can best be employed in an institution especially equipped and designed for the treatment of inebriety

In my opinion, sanitaria or institutions for the cure and treatment of these cases should be established and maintained by the state

Some objections might be raised to the congregation of inebriates for treatment, but these are trivial as in the case of the insane and epileptics in comparison with the benefits For instance, it has been urged that the moral tone is lower among a number of individual inebriates living together than where there is only one Whatever weight can be attached to this objection is far more than counterbalanced by the emulation where there are different individuals, besides a sharpening of wit and a stimulation of thought, which are often of undoubted service in cultivating the intellect and elevating the tastes of the inmates

In a properly managed institution the patient should not only have the advantages of the best medical treatment, baths, etc but there should be lectures and discussions which would interest and stimulate thought, social gatherings, music facilities for study, for the exercise of handicraft and for artistic work With it all however, there should be a kindly discipline and each patient's treatment recreation study, exercise and work should be carried out with regularity and system and under the guidance of a strong directing mind, by the unconscious force of a masterful friend

Such an institution should be in the country with sufficient land to afford work for the patients which will give them the benefit of fresh air sunlight and exercise The labor assigned the inmates should be made as agreeable as possible. A man, for instance, who has always lived in the city, will learn something during his course of treatment, of agriculture of horticulture, etc Lectures should now and then be given on these subjects

so that the patient will return to his home with a wider knowledge than he possessed before, which in itself is of value

The time spent in this country home would be of great benefit to the average man, especially the city-bred individual There is something very restful and recuperative in virgin dirt Nature soothes Neurotic unstable people would surely gain strength and earthly virtue in life such as a country sanitarium of this sort would give them A grove, a barnyard, a garden, a ploughed field, are far more healthful and not half so nasty as the average vaudeville or the many so-called attractions of metropolitan life

The length of time a patient should remain in a place of this kind varies according to the individual, and the duration of the illness Belief in a speedy cure is unconsciously fostered by the difficulties in the way of heads of families absenting themselves from their homes, from their business or other callings for a protracted period Nature can not be cheated, and it is the duty of the medical adviser to state plainly to the patient and his friends that several months should be spent in the sanitarium The so-called quick cures almost invariably result in relapses sooner or later

I think this subject, "The Care of Inebriates" is a very important one, quite as important as the care of consumptives and it is our duty as medical men to create as rapidly as possible, a public sentiment toward the establishment of state institutions for the care and treatment of inebriates

I wish that this Section on Hygiene and Sanitary Science at this meeting of the American Medical Association, would put itself on record as earnestly recommending such institutions

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THE PSYCHIC TREATMENT OF INEBRIETY AND ITS RELATION TO SO-CALLED CURES *

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We apply the term inebriate to a class of persons who, involuntarily and not as a matter of choice, have become habituated to the use of alcoholic liquors in excess, either periodically or more or less habitually, and who, under these conditions, have lost their self-control and whose will power is entirely in abeyance to their appetite I maintain, however, that in a large proportion of cases the will power is not destroyed, or so handicapped as to be beyond the power of resurrection, but is overcome and held in subjection by a master passion, which dominates the will The indications, then, are simple we must rouse the latent will power and make it aggressive, in other words, oppose the psychic to the physical nature "The flesh lusteth (or striveth) against the spirit We must reverse this order of things

All forms of inebriety are not subject to this method of treatment I exclude all cases complicated with organic disease, as the later forms of syphilis, or alcoholic lesions or other organic changes, etc —complications not uncommon in this class of cases—conditions with which the will power has little or nothing to do and which must receive direct and appropriate medical treatment

I consider the simple, uncomplicated form of inebriety, more especially in its earlier stages before serious lesions have occurred, and especially that earlier and formative stage which by common usage is often called "habit" or "vice" It is important, therefore, to note the fact that psychic treatment should be selective and applied only to appropriate cases

PSYCHIC INFLUENCE.

Every student of psychology is familiar with the "influence of mind over matter" We see this in the sick room, as physicians we know "a merry heart doeth good like a medicine," and we are strongly inclined to believe that the personality of the medical attendant has as much to do with his success, in either his institutional or private practice, as his professional attainments When he can conscientiously do so it should be the effort of every practitioner to instil his optimism into the mind of his patient It is related of a distinguished London physician that he was called to see the wife of a prominent and well-known member of society The physician prided himself on what he was pleased to call his "bedside manners" After he had left the sick room the husband asked his wife how she liked the physician She besought her husband not to call him again, as he reminded her of the undertaker!

The sooner we as physicians recognize the fact that our patients are other than blood and bone, sinew and muscle, and that we should consider something else than tongue, pulse, temperature and excretions, and that there is an intangible, impressionable, sensitive, immaterial nature, influenced by material conditions and environments, which we can depress or elevate, according to our relations to the patient, the better will be our success in dealing with certain classes of diseases, and in proportion as we fully recognize the importance of these facts and apply them in a limited number of cases and to a certain degree in all cases in which the patient is at all responsive

From time immemorial illegitimate medicine and quackery has thriven along the line of psychic influence Whether consciously or unconsciously, there has been a tacit, practical recognition of the fact, and it has been acted on and constitutes the capital stock of all forms of nefarious schemes which are shapen in iniquity and conceived in sin—schemes that endeavor to make gain out of those unfortunates who are afflicted with "all the ills that flesh is heir to," and can be brought under its malign influence

Within a few years, comparatively, legitimate or shall we say, orthodox medicine has put its head out of its shell, looked around, "taken in the situation" and recognized the influence that mental suggestion and various psychic influences may play in the rôle of therapeutics It has learned that certain conditions from without affect certain conditions within, according to psychic law, and so constitute psychotherapy as a department of therapeutics It has learned that there is a class of mental disease in which the will power and the mental condition can be greatly influenced benefited and often cured by such treatment and the active manifestations of which are the symptoms or outcome of the mental conditions, removed

SUCCESS OF TEMPERANCE MOVEMENTS

It is only by accepting the fact of the relation of psychic and physical law and the influential and causative relation the two hold to each other and their mutual interdependence that we can explain certain anomalous

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conditions which are otherwise apparently contradictory The inebriate is before us, he is a complex study, he is of all-around interest to us, not only body, but mind and will, his intellectual and emotional nature, his psychic as well as his physical makeup must be considered We can not divorce the psychic from the physical "What God hath joined together let not man put asunder" The study of mankind is man, but we have studied him from his physical, not from his psychic, side "The body is more than raiment," and the body is simply the clothes that the man is wearing Behind the veil of flesh is the real man himself the sentient, emotional, controlling master of the body

We can account for the success of the so-called temperance movements or instances of reformation in individual cases of well-known drunkards only by accepting as an explanation that of psychic influence When under strong mental emotion the will becomes dominant, asserts itself and masters the alcoholic craving, the psychic overcoming the physical As stated, I limit the application of psychic treatment to the simple, uncomplicated forms of inebriety in the early or initiatory stage, known as "vice" or "habit," and exclude all cases complicated with organic disease, which, of course, call for special treatment Coincidently, however, in all cases I should use, as far as possible, those influences that would affect beneficially the mental or emotional nature of the patient

TWO CLASSES OF INEBRIATES

We are now prepared, at least in a measure, to understand why cases of "alcoholism" so-called, are cured outside of the methods of the theory and practice of medicine It will not do to decry the facts concerning the so-called "cures," because well-authenticated cases are continually before us in which men and women who are drunkards have reformed and remained sober as the apparent result of the "cure," or who have become so independently of any "cure" or treatment

We are, therefore, driven to one of two conclusions, that there are two classes of inebriates 1 Those in whom the will power is not seriously impaired—only latent—and who are free from serious organic lesions and who are amenable or responsive to psychic influence 2 Those in whom the will power is radically impaired, who are the subjects of irremediable disease, progressive and eventually fatal, and over whose condition psychic measures can have no influence Such, I believe, is the rational and, therefore, logical conclusion, if we would explain success in one case and failure of success in another under apparently similar conditions We must classify the inebriate, therefore, especially if we desire to subject him to psychic influences, for I believe it is only applicable to a certain class of cases

QUACKERY AND THE INEBRIATE

All forms of irregular medical practice, "patent medicine" vendors, the dispenser of specifics and nostrums, quackery in various forms, flings bait to all inebriates Its treatment, to a certain extent, is non-selective, necessarily so, especially when it is carried on through the mails or the press by letter or advertisement Let us analyze the method rather than the drugs of the so-called "cures" Whether unconsciously or not, the promoters of these various financial enterprises, for such they are *per se,* act along the line of "mental suggestion" influencing certain psychic conditions, not directly or openly, but by the presentation and medium of certain drugs or "cure-alls," by which the impression is conveyed that through the instrumentality of certain potent, infallible, special proprietary medicines a speedy cure will be effected

The *modus operandi,* by which the "cure" is directed to affect the psychic centers of the individual and call out his latent will power, is ingenious as well as of interest Consider, then, in detail how every move in the plan of these astute students of human nature is centered on the one object, to raise the individual along his emotional nature to that point where he shall exercise his will power and at least decide to "try the cure," by appealing to his confidence, hope, self-respect, pride, shame, fear, all the attributes of his moral nature that influence volition The whole process is to him a "dark séance," over which the glamor of mystery is spread, the potent influence being concealed in the infallible, and precious, and mysterious drug or "cure" Hence the promoters of these 'cures" differ from the regular specialist in psychotherapy, who practices directly on the psychic centers without the medium of drugs or other forms of therapeutic measures, and with the full consent and knowledge of his patient as to the methods used

EXPLOITING A "CURE"

The average drunkard, when he is capable of any feeling at all and when his mental responses are not totally submerged or obliterated, is despondent, hopeless as to a cure or reformation, if he is not in a state of total indifference The "infallible cure" promoter acts along psychic lines, using the "cure" as a blind and various measures as decoys to attain his end, meanwhile concealing his ultimate purpose

Confidence Won —First he must secure the confidence of the subject and the public in general in his truthfulness and ability and so he announces that he has discovered an infallible, never-failing cure He is very assertive, very positive, presents first-class credentials, testimonials, etc in evidence He procures a long list of prominent names to certify to the great benefit of his special method, the Right Rev So-and-So and the Wrong Rev So-and-So, and the great and good of the earth to attest to the fact of the efficacy of his "cure"

Hope Aroused —Confidence being attained, his next step is to instill hope, to show the poor inebriate, despised and trodden under foot, the scum of the earth, that he has a real disease, that he is not the victim of a "vice" or "habit," that he is not a case for the law or the clergy, but for the doctor, that, having a disease, he is a respectable member of society, that he is, therefore entitled to move in the highest circles (not necessarily alcoholic) Moreover, he has a disease of such rarity and extreme interest and value, hitherto unappreciated except by this special syndicate, that ordinary medicines, suitable for ordinary, every-day, commonplace disease, will not do, and so the quack proposes to recover him of his leprosy by using the rarest of medicaments and the most valuable of drugs, in short, that this poor, forlorn and necessarily hopeless outcast is to be treated with a "gold cure" or pearls dissolved in vinegar or powdered diamond dust in capsules if that were possible He must have the rarest and best the world has made a mistake and only now is his worth appreciated Does not self-pride, and especially hope the strongest mental stimulant one can put into the heart of man come up under these conditions which are purely psychic?

The Offer Accepted —One of old said,

your faith be it unto you," and this patient is rapidly approaching that point His confidence has been secured and his hope stimulated, the promoter's pseudo-sympathy, mock compassion, pseudo-philanthropy, positive assertiveness and assumed confidence have secured their end He is successful as a confidence operator, and can shake hands with the "gold-brick man" and the vendor of "green goods" His subject now has a will, a desire to "try the remedy" Here is the case of the spider and the fly, the former has asked him to walk into his parlor, for "it is the prettiest little parlor that ever you did spy," and he is ready to accept the invitation He is assured of a positive cure in a short time at a moderate cost and absolute secrecy, no detention from business, a cheap, painless, absolute, prompt cure The burden of years is to be removed in a few hours or days What more could he ask?

A Cash Transaction—But certain preliminaries are necessary, mind you, the quack wants gold, spot-cash gold, he is not under any psychic spell He agrees to put so much gold into the blood of the patient, but the contract is that the patient must first put so much into the promoter's pocket

The "Institution"—This trivial matter being settled, the prospective patient starts for the "institution," arrives at the station and receives a prearranged ovation from those who have already become inmates of the "institution." All this stirs up his self-respect and pride, and that "fellow feeling" which "makes one wondrous kind," and that communism of the unfortunate which constitutes its own fraternity asserts its influence.

The "Graduate"—After a short treatment he "graduates," mind you, from the "institution," which hereafter he must regard as his *alma mater*, not a hospital or a sanitarium Being graduated, "he is eligible for membership" in one of the numerous "gold-cure clubs," which he is invited to join Environment after cure, influence of association and following up the subject should not be lost sight of

So far so good All this has been along optimistic lines, but before the man leaves the "institution" another element in his psychic makeup is appealed to, and that is fear, to the effect that if he should get intoxicated and fall away, and thus disgrace the "institution" and dishonor his *alma mater*, he must never return, and he will be cast out of the synagogue and ever thereafter be regarded as a "publican and sinner"

PSYCHIC VALUE OF THE "CURE."

Although I have thus treated the so-called "cures" in a satirical vein, the illustrations are founded on fact I ask if the methods used as described are not all along purely psychic lines, and do they not act by calling out the prominent elements of the emotional and intellectual nature, confidence, hope, fear, pride, self-respect all of which strongly stir up the will to action, to assert and maintain its authority? Does not this method also explain how "cures" occasionally result, irrespective of the action of drugs, or when the latter play a feeble, irrational or illogical part?

The methods used we certainly decry as a species of mercantile trickery and unprofessional, and deny the action of any drug as a factor in the "cure" But can we so easily explain away the results, although these may be temporary or incomplete?

We appreciate the well-known psychic laws through which these results can be obtained, although masked and covered by false methods and operated under false colors To the public and the patient the psychic side of the "cure" or "reformation," the real influence, is out of sight, and so is out of mind and evidence, and the prominence is given to the drug or cure exhibited, because in this the financial part of the venture is assured, which alone can succeed as a secret proprietary medicine, operated and controlled by a few individuals or a syndicate, as the case may be

VALUE OF DRUGS IN THE "CURE"

The question naturally arises, What part do drugs play in the general scheme of the "cure"?

1 They act along the line of "mental suggestion" Drugs have a psychic value. If we announce a disease we must proclaim a "cure," a medicine, a drug The public stomach and mind are so constituted with reference to medicine that the stomach always has the priority, one can not cure without medicine, and one can not substitute an influence for a substance, a dose of psychic for a dose of physic The public will not tolerate any such substitution Indeed, we of the regular profession not infrequently give a drug for its psychic value The "bread pill" or the oft-used *placebo* will rise up and condemn us "Tell it not in Gath, publish it not in the streets of Askelon"

2 The drug may act also as a therapeutic handcuff, by obscuring the vision and nauseating the stomach a temporary disgust for liquor may be produced and the insane craving held up for the time being Thus something is being done for the patient and that of itself is of psychic value, and all this is essential to hold the imagination of the patient to the idea advanced and give the contract force But all drugs that may produce a distaste for alcoholic liquors only exert a temporary control and can not be indefinitely prolonged, if of any active value

3 In the so-called "cures" the drugs are not used in accordance with the rules and practice of rational medicine and are illogical as to their application To assert that 100 individuals in all conditions of age, sex, temperament, stage of disease, etc., are to be treated in the same way, at the same time, same dose and same method, without regard to idiosyncrasy or other causes that influence the treatment of disease and the selection of remedies, is not in accordance with medical practice or even common sense Such treatment is given on the principle that we all take a pinch of snuff and, therefore, we all sneeze But these so-called "cures" are put up in definite, uniform shape as to usage and quantities, and are sold to individuals or "institutions" who desire to practice the "cure" The whole use of drugs in these cures is illogical and is not based on the practice of rational medicine

4 Moreover, I do not believe that there is, or from the nature of the case ever will be, any so-called "cure" or specific for the treatment of inebriates, in the same sense that quinin is a specific for malaria or the iodids and mercury for syphilis

I do not desire to give undue prominence to these so-called "cures" or specifics, nor to any organizations that are operating without the pale, and yet claim to be acting within the lines, of orthodox or rational medical practice They are not so doing, either in their methods or their practice, the former are irrational and the latter is unethical My sole motive is to show that the reason of their apparent success is not due to any drug or specific remedy, but that it is through the psychic conditions evolved, and so that, finally, when we are brought face to face with the "cures" or reformations result-

ing from irregular methods, or without the intervention of any method or drug, we can explain the result in these cases satisfactorily, inasmuch as they are in accordance with psychic laws, which are independent of any therapeutic agency through the action of drugs

Mystery is the great stock in trade of all forms of irregular medical practice I have endeavored to pull aside the curtain and reveal the secret The "cabinet trick" loses interest and vanishes away when we are familiar with the mechanism that produces the optical delusion Publish the formula and the charm of the secret specific and nostrum will be lost

The basis of all medical humbug and charlatanism consists in operating on the credulity of the public and securing results by appealing to all the attributes of its moral nature I do not bring forward as an inducement any mercenary motive when I allude to the alarming array of figures as to the consumption and cost to the public of the "patent medicines" and "cures" with which every civilized community is flooded

PSYCHOTHERAPY

We are beginning to recognize psychotherapy as a valuable adjunct to general therapeutics If the quack and the medical humbug—illiterate, unscrupulous, unscientific—have met with success even in their rough and ignorant manipulation of this, the most delicate and refined of all our methods of therapeutics, what a future is in store for those who, fully educated and thoroughly conversant with this branch of medicine, win new laurels in the field of mental therapeutics, especially in inebriety Nor must we fail to learn the lesson, although it may come to us from an irregular source

SUMMARY

Let me summarize in brief the points emphasized

1 The so-called "cures" or specifics for alcoholism or inebriety do not attain their effect through the action of drugs, but through the influence of psychic law, which is the primal factor in the "cure"

2 The action of drugs is indirect and secondary, but by mental suggestion may have a psychic value

3 The class of alcoholics or inebriates who are susceptible to such influences is limited to such persons as are responsive and in the earlier or formative stage of the disease

4 The originators of the so-called "cures" are illogical in their use of remedies and, therefore, untrue in their assertions, and in their practice are not in accord with rational therapeutics or the theory and practice of medicine They are not ethical nor in any sense humanitarian and, therefore, should be excluded from all the protection afforded legitimate or regular medical practice and should be placed under the laws which regulate and control proprietary or "patent" medicines

5 There is not any medicine, drug, preparation or "cure-all" which is a specific in the treatment of alcoholism or inebriety in the same sense that quinin is a specific for malaria or mercury for syphilis

6 In a certain class of selected cases of inebriety it is proper to use psychotherapy as a therapeutic agent, especially in the earlier stages before complications develop and when the patient is responsive to such treatment In cases complicated with organic disease appropriate medical treatment should precede or accompany psychotherapy if the latter be deemed advisable

[THE SYMPOSIUM ON ALCOHOL, OF WHICH THE PAPERS OF DRS BUTLER AND MASON ARE A PART WAS BEGUN IN THE JOURNAL FEBRUARY 2 AND CONTINUED FEBRUARY 9 AND 16 THE DISCUSSION IS ON PAGE 728]

THE PLAGUE IN AMERICAN CITIES *

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To the American physician of the last generation "plague" meant but very little If he had a particularly active imagination and especially if he had read some of the thrilling accounts of the terrible epidemic, he saw an infected city where the workmen were stricken at the bench, the banqueter at the table, where the ties of kinship were forgotten in the general alarm, where people fell dead on the streets without warning, and where the well were too few to remove the dead This picture could hardly be too strong for the truth, but it was general and carried nothing of a special nature Physicians saw nothing of the cause of the disease, nothing of the symptoms—only the result

Our text-books almost wholly ignored the question, and our teachers referred to it, if at all, as something we would never see unless we traveled in the far East We were brought up and trained in the belief that America was exempt from its visitations, and that it was useless spending time studying a disease we should never meet We were rudely awakened, especially we on the Pacific coast, when in 1900 the first cases were recognized in San Francisco We found our fancied security was false, and that it not only could but had invaded our shores Whence the first case came, or when, we can not tell, nor does it much matter, but the fact of its having secured a footing and gone for a certain length of time unrecognized is of great importance It serves to point out and to emphasize the danger in which we are continually, and the need of thorough instruction in regard to the disease, its diagnosis, its methods of dissemination, cause and treatment

It is not my intention to treat of these things but to point out to the profession the danger of the situation and urge that steps be taken to meet it

With our present close relations with the countries where plague is always in existence, relations which will in the future grow closer as our commerce extends, we stand facing a problem, the solution of which must be grasped at once Much is being done by the United States Public Health and Marine Hospital Service to prevent a fresh importation of the disease The system of inspection of cargoes and passengers at infected ports and again at home ports by physicians of this service is a great safeguard and will do much to protect us, but careful and watchful as these men are, they can not close all avenues of danger and we must be prepared at any time, in every part of the country to meet and to suppress its invasion To be so prepared the natural history of the disease must be better known

THE PLAGUE BACILLUS AND TRANSMISSION OF THE DISEASE

The plague bacillus discovered by Kitasato is the undoubted cause of the disease, and with the aid of the microscope the diagnosis is comparatively easy, thus removing one great obstacle The means of development and dissemination must be thoroughly studied for on the understanding of these processes our success depends Some things in regard to the disease we fully understand but other and important ones are at least doubtful We know that the pneumonic type is violently

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contagious, every droplet of sputa being thronged with germs We know equally well that in the plain bubonic type there is slight danger of contracting the disease directly from association with the patient We know also that there is always a great mortality among rats at the time or preceding an epidemic What is the connection between the two? Is it direct or through an intermediary insect? Is the disease a place infection, the germs living in the befouled soil and under favorable conditions developing in great virulency? In what way and to what extent is it spread by merchandise? These and many more are questions that must be answered before we can hope to cope intelligently with the question That merchandise, as claimed by some, especially Kitasato, in accounting for its late appearance in Japan, is sometimes responsible, there can be no doubt, but as it becomes infected only through the virus, it is not a probable cause, except in such as may be accessible to rats Infected clothing is a recognized cause, and it is especially dangerous when it is folded and packed away from the disinfecting influence of light and air

EXPERIENCE IN CALIFORNIA

Our experience in California leads me to believe that the disease is spread almost wholly by means of animals, of which the rat is the chief but not the only one Several cases have occurred outside of San Francisco, where there was no death among rats Squirrels, however, were dying freely in the vicinity and all the cases could be traced to exposure to them One recent case, after a two years' rest, was in a young man in a healthful and sanitary part of Oakland He had not visited San Francisco nor been exposed to imported goods or infected clothing He had, however, four days before, hunted squirrels in the infected district That the squirrels are infected with plague is not as yet proven, but circumstances point strongly that way, and it seems only reasonable that the United States Government should investigate this point, for if it proves to be a fact it is of the utmost importance to the whole country

While probably California, owing to her location on the Pacific coast and the close communication with the Philippine Islands, Hawaii and the far East, is more liable to invasion of plague, she is doubtless less liable to a severe epidemic Her long, warm and dry summers and the absence of a cold season, when the population of the filthy quarters of the city are confined to the houses, her population, as a rule, being well nourished and healthful and above all, her excellent sanitary conditions will tend to a minimum number of cases

THE RÔLE OF FILTH

While filth is not the immediate cause of the disease, it is possible that the germ may live and multiply in it If not "Filth and overcrowding imply close proximity of the sick and the healthy, an atmosphere saturated with the emanations of the sick, a lowered tone of the general health, abundant saturation of soil and surrounding media with animal refuse, filling them as a nidus for what might be termed natural culture of the germ abundance of body vermin of all kinds, abundance of other vermin, such as rats and mice, carelessness about personal cleanliness, about wounds of the head and feet about clothing, and about food, dishes and water One can understand how, in such circumstances the germ can multiply and spread"

It is not safe however, for any community, no matter how favorable their sanitary and other conditions may be, to depend on them for protection Plague is a rodent disease and wherever man goes, rats will follow, and it is quite possible for them to carry the disease long distances before it shows in man Any vessel that sails the sea may become the bearer of the plague rat, and unless the utmost care is exercised that rat may land, and become a center of infection These rodents do not stay quietly in the ports of entry, but take trains for other parts, there to infect their kind and then mankind

PROPHYLAXIS

Our only safety is an active interest in the disease and a solution of the many questions pertaining to it. The lack of exact knowledge as to its means of dissemination and avenues of inspection often make the efforts at controlling it ineffective, and severe epidemics result Still, much is known that is useful in preventing an outbreak and in limiting it in its early stages Every health organization, whether state or city, should be in possession of these facts and ready to use them at all times In cases of great exposure they should constantly watch the rats, and all found dead should be examined Their entire extermination is a question of the near future On the physician, however, must always rest the great responsibility of discovering and recognizing the disease in men, and this is no easy matter Often, in the beginning of an epidemic, the disease easily passes for some other, especially in the pneumonic form Even the bubo may not excite suspicion, and naturally would not, in one who had not given the subject especial study

The disease is widespread over the world and may infect any port at any time, and our only safety lies in an early and public recognition of the disease, and immediate active measures for its suppression

[FOR DISCUSSION SEE PAGE 728]

THE PHYSICIAN AND THE NOSTRUM *

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During the four years that we have been engaged in the work of arousing public interest in the evil of "patent medicines" it has been my pleasure, in common with others, to have received hundreds of approving letters from physicians all over the country and scores of complimentary resolutions from medical bodies And it is my sincere hope that the few words I shall say to you this evening, in my first appearance before a medical body, may not be accepted as being in any way unappreciative of those marks of approval I appreciate and value them

But I feel that the time has come, if we are to succeed in the fight in which we are engaged, to be perfectly frank as regards the relation of the medical profession to proprietary medicines I am going to try to point out to you that in two distinct ways the medical profession is to-day absolutely hindering us laymen in our fight and clogging the wheels of further progress First, in your inactivity where you should be active, and, secondly, by your direct cooperation with the "patent medicine" traffic

Every man knows that the life of a nostrum depends on publicity, and one of the first things we did in our

* Read by Invitation before the Philadelphia County Medical Society Dec. 12 1906 A report of the papers and discussion at this meeting on the Symposium on the Suppression of Quackery appeared in THE JOURNAL Jan 19 1907 p 248

fight was to see to what extent the press could be persuaded to close its columns to the advertisements of "patent medicines" It was not easy, for the business office of a paper or magazine is very powerful. Yet to-day scarcely one of the reputable monthly magazines will accept a "patent medicine" advertisement, and the same is true of the prominent weeklies The best of the farming papers are to-day immune from this advertising Pressure is being brought on the religious press that will soon result in a general clearing up of those papers Progress with the daily newspaper has been slower, still, there are forty-three daily papers, large and small, to-day that will not accept "patent medicine" advertisements Now, gentlemen, remember that such a step means a great deal in the revenue of a periodical I know a magazine that could easily increase its advertising revenue six figures a year if it accepted "patent medicine" advertisements I have no doubt that if the New York *Times* and Philadelphia *Ledger* admitted this business these two papers could increase their revenue by at least fifty thousand dollars a year Many of these papers and magazines have taken this stand on principle, others because of the pressure brought on them by their readers The public at large has been writing to its newspapers insisting that those advertisements shall stop, the church people have been writing to their papers, the farmers have been writing to their papers—all classes of the public have been busy, all classes, gentlemen—except the physicians

Look at your average medical paper—reeking with the advertisements of proprietary—so-called ethical—preparations And not only advertisements, but reading notices palpably intended to deceive The very class of papers that should have been the first to cleanse their pages is to-day the last to make even a move in that direction, and stands to-day, in this respect, as a discredit to honest journalism

Now, what is the result? I go to the publisher of a newspaper and ask him to clean his columns of "patent medicines," and he points, as he has done in many cases to me, to the medical press "Why, man," he argues, "these preparations can't be so bad as you fellows make out, or they wouldn't be advertised in these medical papers These medical publishers know better than you do what is good and what is bad in these 'patent medicines, and what they allow to go into their papers I guess we can safely stand for" That is why it is so important that the medical press should be cleansed of these advertisements it is in the influence, the example that they exert on the lay press, and it is an argument on the part of the lay publisher that is very difficult to combat It is this argument that again and again is used by lay publishers in writing to their protesting readers, and then these readers send the letters to me and ask, "Is this true? Are these advertisements permitted in good medical papers?"

Now, you know that it is true, and you know also that it should not be so, and yet what have you, physicians, done to stop it? You have, in your societies passed resolutions a very easy and comfortable thing to do and about as ineffective as it is comfortable I have myself seen these resolutions received by the medical publishers and disposed of with a grin—in the waste-basket But what have you done as individuals? For let me tell you as an editor that the editor or publisher of a paper of any kind is mighty sensitive to the individual protest of his readers When letter after letter comes in harping on the same subject, take my word for it that editor or publisher is going to sit up and listen Those letters are from the people on whom he depends for his support, and he is not turning a deaf ear to the source of his livelihood

Let me give you an illustration of how this works One of the most prominent daily newspapers began to get letters from its readers objecting to its "patent medicine" advertisements The first few letters made no impression on the publisher, but as they kept coming in he realized that he had to make some sort of a show of being good So he declined the most flagrant. When this fact became known to one after another of the "patent medicine" manufacturers, they argued that if this newspaper found it necessary to trim its sails to appease the public, it was idle for them to advertise at all to a public in that state of mind So they stopped, and they have stopped so effectively that the publisher of another newspaper, which readily takes any "patent medicine" advertising it can get, told me a few weeks ago that, while his paper had carried in the first eight months of 1905 over sixty-two thousand dollars' worth of "patent medicine" advertising, this year for the same eight months he had carried eighteen thousand dollars' worth That is what can be done

Now, while the people at large have been busy with their papers, I have not heard of a single, well-ordered and coherent movement on the part of the medical profession individually to do the same work with its papers You have talked beautifully, but what have you done? The best proof of the fact that you have done practically nothing is shown in the condition of your papers, and yet, gentlemen, it was your duty, more than the duty of any other body of men, to do this It is no excuse to say that physicians are too busy There are men in other professions just as busy as you are You have been inactive You have allowed us laymen to work with our papers while you have sat idly by, or made desultory attempts, where you should have taken a vigorous individual stand and stopped it And you can stop it if you make the honest effort You are the supporters of these papers, without you they can not exist, and on you, directly and solely, rests the responsibility of the present situation that we as laymen can scarcely go any farther with compelling the cleansing of our papers so long as those papers can point to the medical press as its companion in perfidy

You have two ways open to you

Either insist as subscribers and readers that these papers shall cease these advertisements

Or stop, as physicians, from prescribing these medicines yourselves and thus make this advertising unprofitable Or both

And this brings me, naturally, to my second point your direct co-operation with the "patent medicine" curse—a co-operation that I confess, gentlemen, is nothing short of appalling I give you my word for it that as one result of my investigation of this question there has come to me an amount of evidence as to the unintelligent prescription of secret proprietary medicines on the part of physicians that, if published would tend to cause an amount of unrest and distrust on the part of the public that is mighty unpleasant to think of

It is not for me gentlemen to diagnose the reason why physicians habitually prescribe proprietary preparations Several of your own writers claim because it is easier, others because physicians are lazy and still others that your medical colleges do not adequately teach the writing of prescriptions I do not know, for I am not

competent to say, but what I do know is that this prescribing of these preparations seems to be on the increase to an alarming extent You own Doctor Jacobi says that in twenty-five years the percentage has grown from one in fifteen hundred prescriptions to 20 and 25 per cent He also says that in a single New York drug store investigation showed that "70 per cent of the prescriptions sent in by reputable physicians contained either nostrums, pure and simple, or as a part of a compound" Doctor Billings, of Chicago, says that in his city the records of one drug store showed 42 per cent of prescriptions prescribing proprietary medicines, and in another 50 per cent In Boston, 38 and 48 per cent

Now, gentlemen, I will not gainsay that there are good proprietary preparations and that a physician, after a diagnosis of a case, and knowing his patient, and being fully aware of the exact ingredients in such an ethical preparation, is perfectly justified in prescribing it, if he feels that it meets the conditions of that case Whether such a course is detrimental to scientific medicine is for him to settle with himself

But there is a time when he is not justified in such prescription, and when he closely borders on the criminal line, and that is when he prescribes a preparation of which he either does not know the ingredients or, what is even worse, when he has erroneous information as to those ingredients

And yet this prevails to-day in the medical profession, and prevails to an extent that is almost impossible of belief to the layman When I heard the first mutterings of this condition of things I gave it no credit While I knew that physicians were human and made their mistakes in common with us all, I could not believe that they could make *that* mistake But instance after instance came to me until I could no longer turn aside, and I determined to find out And recently I did

Conditioned that I should not reveal my source of information, nor give names of remedies or physicians, I was given an opportunity to examine 100 prescriptions that had been filled Of those 100 prescriptions, 42 prescribed a proprietary drug or article in part or in whole I selected 30 of these, and called on each of the physicians who had written those prescriptions Now, gentlemen, those physicians were men of excellent standing, some very high in their profession, and how many of those 30 physicians, would you say, gave me an accurate, or anything approaching an accurate, analysis of the ingredients of the nostrums which they had prescribed? How many? *Two,* gentlemen, *two* out of all the thirty! The rest either did not know, or—what is even more dangerous—thought they knew when they did not.

One of these prescriptions called for a certain headache remedy, given to a woman who was in an exhausted condition, who had weak heart action, and who, having read of the dangers of headache remedies, did not trust her own judgment, and called for her family physician He gave her a remedy, saying that he knew it to be harmless, that it was entirely free of the powerful drugs of which she had read Within a half hour of taking the remedy the woman's lips began to get blue she went into unconsciousness, and it required all that two doctors could do to bring the woman back to consciouness The remedy contained 61 5 per cent of acetanilid! The physician, when I saw him, showed me his proof on which he had based his knowledge, the statement of the manufacturers, whom he said were reputable people!—a statement, as I happen to know, written by a man who never went to a medical college, a man whose word every physician would scorn to accept did he know him When I showed him my analysis he was dumfounded, and confessed he hadn't known *But, gentlemen, he should have known It was his duty to know!*

Another prescription called for a certain tonic that the physician told me was one of the most reputable tonics known to the profession, its ingredients of quinin, beef and iron were universally known and nearly all physicians prescribed it. One of its greatest virtues was, he told me, that it was non-alcoholic I proved to him that the tonic did not contain even a trace of beef or iron, but that it did contain 22 per cent. alcohol He could not gainsay my authority, he was surprised and confessed that he had not known *But, gentlemen, shouldn't he have known?*

One of these prescriptions gave to a child a remedy calculated to soothe its restlessness It did so, so effectively that the parents changed their physician, went to another, who prescribed another remedy, and the child lay in a stupor for two hours I saw both of these physicians, they confessed to me they did not understand the case But I did, gentlemen, for both of these physicians had given that child morphin concealed in "ethical" proprietary preparations, and when I proved this to them they were amazed and confessed they hadn't known *But, gentlemen, should not a physician, prescribing for a child, know?*

Five of these prescriptions called for a certain tablet supposed to build up the system in extreme cases of weakness, and especially given to women at certain periods of physical drain and exhaustion. All of the physicians assured me that these tablets were among the few ethical preparations that could be absolutely trusted, and each showed me a printed formula of their contents These tablets, I was told, contained among other things iron peptonate, two purely vegetable compounds, and extract of nux vomica "The best on the market," said one of these physicians to me As a matter of fact, those tablets contain not the slightest trace of iron peptonate or nux vomica, but do contain two principal ingredients—starch and liquorice! And yet, gentlemen, these same tablets, I have learned from careful and authoritative sources, are to-day being prescribed by a large number of the best physicians of Philadelphia, and when I have asked several of them on what authority they were accepting their ingredients I was shown a printed formula by the manufacturing concern!

Some time ago, finding it necessary to know about a certain nostrum advertised to the public, and having no time to make an analysis, I consulted five physicians in order to reach a necessary decision All five physicians told me that the preparation contained a dangerous amount of cocain in it, that it was well known for containing that ingredient. I made my decision—only to find that I had made a wrong decision The preparation contained not a trace of coca or cocain and never had *Gentlemen, these physicians did not know But they should have known, or else not have said what they did*

And so I might go on, not isolated cases, not a case here and a case there, but a condition that is dangerously general.

Now, what is the result? The physicians are doing precisely what we are asking the people not to do not to use these "patent medicines," because they do not know what they contain What effectiveness can I make to such an argument when people write to me by

the score citing instances of revealed ignorance on the part of the physician of the preparation which he prescribes, and rightly say to me, "How do you explain this?"

Can I explain it, gentlemen?

Dr Jacobi calls this practice not far from criminal, and I would rather have him say it than say it myself But it is a mighty serious condition, and nothing confronts us laymen in our fight so insurmountably as this argument that can be advanced against the medical profession

We are trying to separate the public from the nostrum, and have in a measure succeeded But what are you doing? Now, let me bring this question home to you—home to the physicians of Philadelphia Are you aware of the fact that this practice of prescribing nostrums has so insidiously grown on you that while in 1905 an examination of several thousand prescriptions written by Philadelphia physicians showed 41 per cent to call for "proprietaries," this year, so far, the average shows 47 per cent ? Are you going to do more and more each year what we are asking the people not to do? If you are going to prescribe "patent medicines," why should the layman pay your fee as a physician in addition to the cost of the medicine which he can buy himself? We are preaching to the public to stop the nefarious habit of self-doctoring, but physicians, by such methods as these, are driving people to doctor themselves, driving them to the quacks and the charlatans There is no question that the whole practice has grown out of thoughtlessness But has not this thoughtlessness gone far enough?

Evidently, gentlemen, the Council on Pharmacy and Chemistry of your national association was created none too soon But even without access to the analyses of the council, the physician has no excuse Opportunities are open to him to learn the ingredients of the medicines he prescribes, and if he has no time to find out he has no right to prescribe what he does not know

And so, gentlemen, you who should be with us laymen in our efforts to stamp out this evil, are not only making our fight the harder, but you are actually hindering us We look to you for help, as I think you will agree we have a right to do in our effort, and what do we get from you?

Unctuous words, but unclean hands

Now, I ask Is this fair? Is it playing the game, gentlemen?

You are here to-night to discuss the question of the suppression of quackery, but it seems to me you have chosen the wrong topic Your question should be the suppression of the *physician* in his *aid* of quackery

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Tuberculosis Exhibitions—The past year was remarkable for the interest taken by the public in the subject of tuberculosis This interest was due largely to the agency of the tuberculosis exhibits given in many cities Numbers of people, for the first time, have had brought home to them, in a manner easy of comprehension, what this disease really is These exhibits have shown to the public in a popular way what has been known to the profession for only a few years Lectures, diagrams, photographs and models of sanatoriums tents, etc., all have been used in impressing on the people the fact that tuberculosis is a communicable and preventable disease As the *Journal of the Outdoor Life* says, the whole subject has been so dealt with as to make the laity clearly appreciate that the effort now being made to stamp out the disease is worth while

STUDY OF TROPICAL DISEASES IN THE PHILIPPINE ISLANDS

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During the last quarter the following research work has been accomplished along special lines of investigation

A DEVELOPMENT OF FILARIA PHILIPPINENSIS IN THE MOSQUITO

Although we have not yet completed our work on this parasite and are not prepared to make a full report on the subject, which we hope to do later, we have, nevertheless, devoted considerable study to the subject since our last report and have demonstrated the following facts

a *Filaria philippinensis* undergoes a stage of development in the body of *Culex fatigans*

b This mosquito, in drawing blood from the infected patient, manages in some way to get about 40, 50 or more times as many filariæ as are found in an equal amount of blood obtained by a needle puncture

c A proportion of the mosquitoes thus infecting themselves seem to succumb to the infection, two of them that we have seen seem to have died acutely of rupture of the stomach, the blood that they had ingested escaping from the stomach and diffusing through the body and legs of the mosquito, coloring them red A much larger proportion die later without this "hemorrhage."

d Among the surviving mosquitoes there are many in which the filariæ do not develop, as they appear to be digested or to escape from the mosquito's stomach into the general body cavity, and there die and become absorbed

e The very great majority of the filariæ are dead by the third day after their ingestion by the mosquito With one exception we have found but two developing filariæ after the third day one in the six day stage of development, the other in the eleven day stage In the exception noted we found 51 filariæ in the thorax of a mosquito at the end of eight days, in slightly varying stages of development

f Additional evidence of the conclusions we stated in our former communication concerning this parasite is furnished by three more patients sent to us by Contract Surgeon Albert L Miller, U S Army, making five in all, four of them having been sent by Dr Miller All of the later cases show the correctness of our general statements based on the observation of the first case The scarcity of the parasites in the blood and the lack of periodicity manifested by them is well shown in the accompanying table (see next page), giving examinations made in three cases at regular periods during twenty-four hours

B MORPHOLOGY OF DEVELOPMENT OF FILARIA PHILIPPINENSIS IN THE MOSQUITO

After losing its sheath and penetrating the stomach wall of the mosquito the parasite passes into the body cavity of the insect, where it is seen at first practically unchanged condition By the third day before, the parasite has worked its way to the thorax where it is found shortened to two-thirds of its former length but thicker

the tail, i e, the part posterior to the sudden offset we described in the worm as seen in the blood, takes no part in this change but remains as a "pigtail" like attachment to the large, plump body The transition of the posterior V spot into the anus is very plainly visible The anterior V spot apparently, and the central spiral viscus certainly, have disappeared The measurements at this stage are length, 210 mm width, 010 mm

By the sixth day the worm has still further thickened to 020 mm, being still much shorter than when it is in the blood, the "pigtail" is still present, the posterior V spot has now disappeared and an anus occupies its place, pressure will force part of the body contents out through the anus

By the eighth day the worm has increased in length and become still thicker, the "pigtail" has almost disappeared, and an intestinal canal can be traced from the mouth to the anus, length, 500 mm, width, 035 mm On the eleventh day the worm has increased in length to 1 24 mm and in breadth to 040 mm It is more actively motile and shows an alimentary canal clearly outlined from mouth to anus, the anus is well marked, the "pigtail" portion of the tail has disappeared, and the tail is blunt and tipped by two papillæ No striation is visible The head is truncated and the margin of the covering (prepuce) is very faintly serrated, no lips being visible The worm is still within the thoracic muscles of the mosquito

TABLE OF BLOOD EXAMINATIONS

CASE 1

7 a. m 3 filariæ in three blood smears	Average per day and night.
10 a. m, 2 filariæ in three blood smears	7 a m to 7 p m
1 p m, 2 filariæ in three blood smears	8 filariæ in 12 smears
4 p m 1 filaria in three blood smears	7 p m to 7 a. m.
7 p m 2 filariæ in three blood smears.	8 filariæ in 13 smears
10 p m 1 filaria in three blood smears	
1 a. m 3 filariæ in four blood smears.	
4 a. m, 2 filariæ in three blood smears.	

CASE 2

7 a. m. 5 filariæ in three blood smears.	Average per day and night.
10 a m, 1 filaria in four blood smears	7 a m. to 7 p m
1 p m., 1 filaria in three blood smears	8 filariæ in 13 smears
p m. 1 filaria in three blood smears	7 p m to 7 a. m
p m, 2 filariæ in three blood smears.	8 filariæ in 13 smears
p m 3 filariæ in three blood smears	
1 a m, 0 filaria in three blood smears.	
4 a m. 3 filariæ in four blood smears	

CASE 3

7 a. m., 2 filariæ in three blood smears	Average per day and night.
10 a m 1 filaria in four blood smears.	7 a m to 7 p m
1 p m 3 filariæ in three blood smears.	8 filariæ in 13 smears.
4 p m 2 filariæ in three blood smears.	7 p m to 7 a. m
7 p m, 4 filariæ in three blood smears	10 filariæ in 13 smears
10 p m 0 filaria in three blood smears	
1 a m 5 filariæ in four blood smears	
4 a m, 1 filaria in three blood smears	

The day and night averages in the three cases are

7 a m to 7 p m 24 filariæ in 39 smears.
7 p m to 7 a m 26 filariæ in 39 smears

Photomicrographs of the developmental cycle in the mosquito have been secured, and as soon as we have worked out as fully as possible the life cycle of this parasite we hope to forward and publish a more complete report, but owing to the large mortality among the infected mosquitoes we can not form an estimate as to the time that the research may involve At present we believe that the life cycle of *Filaria philippinensis* will be found to resemble closely that of *Filaria bancrofti*

C DIAGNOSIS OF CHOLERA

In examining postmortem material from cholera cases and stools from living cholera patients here and at Fort McKinley we have been impressed with the great liability to error under which a man would labor if he relied too much on laboratory methods in making early diagnoses in cholera cases Pure cultures, or even approximately pure cultures of the cholera vibrio are not easily obtained from the stools, and a preponderance of the vibrios in the stool such as to give the appearance microscopically of a pure culture we have seen in but one case

The cholera red reaction we have obtained but once This led us to inquire at the Bureau of Science as to the results usually obtained there, and we were informed by Dr Edwards, the pathologist engaged in that work, that he very seldom gets the reaction in cultures made from the stools, but could usually get it in pure cultures if he used a special peptone (Grubler's "Adamkewitz"), but usually encountered failure if other peptones, including Wittes', were used

D OBSERVATIONS ON THE ETIOLOGY OF DENGUE FEVER.

The occurrence of an extensive epidemic of dengue fever at Fort William McKinley, Rizal, has afforded us the opportunity of investigating the etiology of this interesting and puzzling disease Although many investigators have endeavored to discover the etiologic factor in the production of this disease, and many organisms, from bacteria to protozoa, have been announced from time to time as the veritable cause of dengue, none of them has been generally accepted as such In beginning our work on the subject we at first spent many hours in the examination of the blood, using both fresh and stained specimens, and were forced to conclude that no demonstrable organism can be found in this fluid, blood cultures were then resorted to, the blood being drawn from a vein of the arm under strict aseptic precautions, and in this way many cases were examined, as a result of our work along this line we were forced to conclude that no organism was found constantly enough in these cultures to warrant us in regarding it as having an etiologic relationship to the disease Some of the cultures remained sterile, although kept for weeks, but the majority of the cultures became infected by organisms which were obviously contaminations and of no etiologic significance

Having thus failed to demonstrate any organism in either fresh or stained specimens of blood or in our blood cultures, we directed our attention to the possibility of producing the disease by the inoculation of blood from a dengue patient into the healthy man, fortunately for the success of our work we were dealing with a disease which is not dangerous to life, and for this reason felt justified in making such experiments

Four members of the hospital corps serving here volunteered, and in all of them we succeeded eventually in producing dengue by the intravenous inoculation of blood from cases of dengue, in three of them by the inoculation of unfiltered blood, and in one of them by the inoculation of filtered blood We desire to express our admiration of the courage and devotion to duty of these men who, having no prospect of pecuniary reward, cheerfully placed themselves in our hands for experimentation As more volunteers were needed, and as no more hospital corps men were available, we visited the commanding general of the Philippines division and requested that we be permitted to ask for volunteers from the line of the army The commanding general suggested that a reward should be offered for volunteering and authorized us to offer $25 in gold for each volunteer, including those on whom we had experimented, as well as the privilege of having his name placed upon a list for favorable consideration in the assignment of station and details This offer was transmitted to the

commanding officers of troops in and about Manila and as the result of it we have secured many more volunteers than we need, and have therefore had to refuse a large number Thus we have been enabled to continue our researches regarding the etiology of dengue, and as soon as they are completed, we will submit a detailed report of the results obtained

CONCLUSION

From the work which has already been accomplished, and that which we have in view, we hope to be able to demonstrate the following concerning the etiology of dengue fever

1 That the cause of dengue is present in the blood of the infected individual, as the intravenous inoculation of healthy men with blood from a patient suffering from dengue is followed by a typical attack of the disease

2 That the organism causing the disease is probably ultramicroscopic in size, as the inoculation of infected blood into healthy men after it has been passed through a filter which retains the smallest known organism, produces a typical attack of dengue

3 That the incubation period is four days whether filtered or unfiltered blood be used in inoculation

4 That the disease is not contagious

5 That dengue is transmitted by at least one species of mosquito (*Culex fatigans*), as proven by experiment

Clinical Notes

ANGUILLULA ACETI (VINEGAR EEL) IN THE URINE

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PHILADELPHIA

It is certainly uncommon for the *Anguillula aceti* to enter the human bladder, yet there is at present sufficient evidence to show that such infection may occur Stiles and Frankland[1] report the case of a young female in whose urine great numbers of the *Anguillula aceti* were found These writers obtained the urine by catheterization and in this way proved conclusively that the *A aceti* came from the bladder Stiles has given rules for the determination of this nematode, but since the vinegar eel can be readily obtained from cider vinegar for comparative study I have omitted its zoologic characteristics

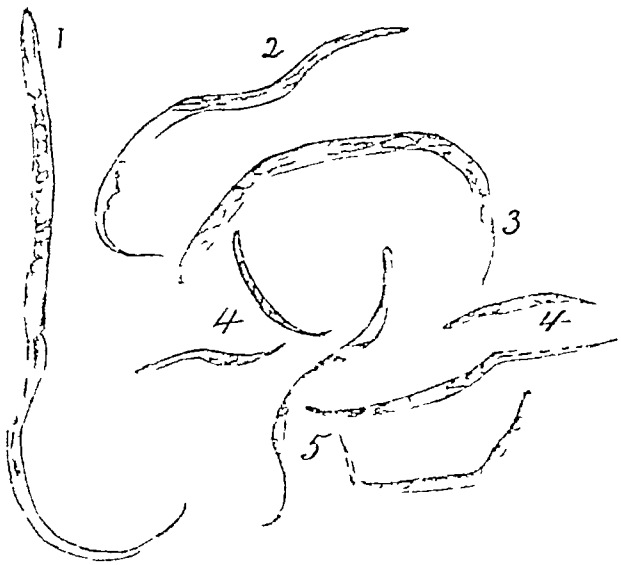
In 1902 Billings and Miller[2] reported their findings of the *A aceti* in the urine from two patients, one a young female, and in the other the sex is not mentioned These writers do not state that they obtained the urine by catheterization, which permits of a possible extraneous contamination of such urines, although in one of their cases repeated examinations showed the urine to contain these nematodes Both patients suffered from acute cystitis and one from hematuria

Sheiber,[3] in 1880 reported finding repeatedly nematodes in the urine of a woman but regarded the parasite in question as probably the *I stercoralis* His report closely compares with my own observations since the symptoms of cystitis subsided, and the nematodes were absent from the urine after repeatedly washing the bladder Thayer[4] describes two cases where round worms were found in the urine, but in neither instance were they determined to be the *A aceti* Strong[5] has also discussed at length the question of infection of the bladder with round worms I have reported two instances[6] where hematuria followed infection of the bladder by the *Rhabditis genitalis*

During the past nine years there have been examined microscopically, by me or my assistants, both at my private laboratory, and at the laboratory of the Medico-Chirurgical Hospital, the Pennsylvania Hospital, and the Philadelphia Hospital over 17,000 specimens of urine It is interesting to note in this connection that the *A aceti* was found but twice (once possibly due to external contamination), the other in urine obtained by catheterization from the male bladder The *Rhabditis genitalis* was also found twice

Patient—Mr K., aged 52, a coachman, born in Ireland,

Symptoms—He presented the general symptoms of acute cystitis, on the second day of his trouble there was great burning of the urethra and an almost constant desire to void urine Constitutional symptoms were absent



ANGUILLULA ACETI (Vinegar Eel) 1 Mature female 2 Mature male 3 Young worm five days after vinegar mother was added to acid urine. 4 Young worms present 48 hours after inoculation 5 Three days after inoculation of urine (All forms one to five may be present in the urine when voided)

Urinalysis—The physician in charge handed me a specimen of the urine which on examination gave the following Color brownish yellow, specific gravity 1 020, reaction acid (strongly), albumin and sugar absent, developed on standing a rather heavy precipitate which formed at the bottom of the liquid

Microscopically, the sediment showed, in each drop many specimens of the *A aceti* which are best described by the accompanying illustration it also contained many large and small epithelial cells many leucocytes, few red blood cells, shreds of mucus, and much granular debris In striking contrast with the microscopic findings of normal urine there was an absence of amorphous urates and crystalline substance

In order to avoid possible error that might arise from contamination of the urine after it had been voided the patient was catheterized at three different times and in the urine thus obtained the *A aceti* was found

1 U S Bureau of Animal Industry Bull 35 p. 35
2 Amer Med May 31 1902, p 903
3 Virchow's Archiv 1880
4 Jour of Exper Med Nov 20 1901
5 Johns Hopkins Hosp Rep., x
6 Amer Med Jan 3 1903 2)

The symptoms of cystitis ameliorated decidedly after washing the bladder with a solution of boracic acid, and after three daily applications of this treatment it was impossible to detect the *A aceti* in the urine

At the suggestion of my assistant, Dr J Hamilton Small, I obtained a specimen of urine from this patient's wife and to my surprise found it to contain the *A aceti* On questioning Mrs K, I learned that she had been using vaginal injections, to each of which she had added a small quantity of vinegar, with the object of preventing conception I was not permitted to catheterize Mrs K although at this time she too suffered from the symptoms of acute cystitis

Among the five reported cases of infection of the bladder by the *A aceti*, four of them presented the symptoms of acute cystitis, and in three hematuria was an early symptom Albuminuria, when present, was due to an admixture of blood In all the reports examined the symptoms of cystitis have subsided with the disappearance of the *A aceti* from the urine, and in all, the course, while acute, was of short duration

COMPLETE REMOVAL OF FAUCIAL TONSILS *

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Aside from a broader knowledge of detail that results from a repetition of facts, it would be superfluous on this occasion to give an extended discussion of this subject, but, inasmuch as unanimity of opinion does not obtain throughout the profession as to the proper method of treatment of diseased faucial tonsils and the best mode of their removal, and being desirous of presenting a method which has proven satisfactory in my practice, I wish to direct attention to the following facts

Owing to their intermediate position between the mouth and pharynx and their glandular structure, the faucial tonsils frequently become infected and chronically diseased by the passage of food or foreign matter into the ramifying glandular ducts which open on their exposed surface, and after a time their function of

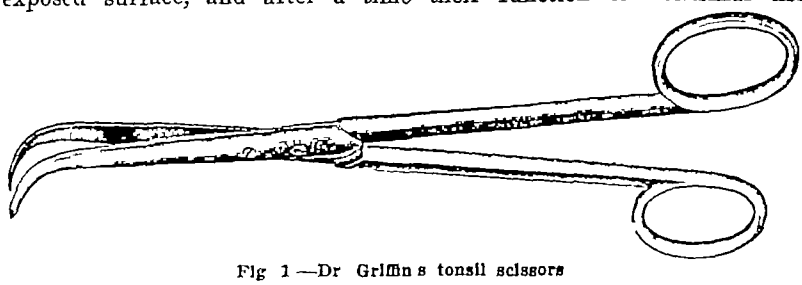


Fig 1.—Dr Griffin's tonsil scissors

pharyngeal lubrication becomes so perverted that the ducts and glands finally become distended and indurated by the retention of a caseated secretion, composed mostly of desquamated epithelium leucocytes and micro-organisms The resulting ptomains of decomposition permeate the surrounding lymphatic system, leading to chronic inflammation of adjacent pharyngeal structures and often evidencing its systemic effect by the production of rheumatic symptoms

Under these circumstances it would seem that only one method of treatment would be considered, but a perusal of many books on the subject indicates that palliative measures in the form of gargles, sprays and applications to the distended ducts constitute the rational course of treatment If there be a broad and devious path that leads to disappointment, both to the patient and attending physician, the above procedure which attacks the disease only superficially, or a partial removal of the tonsils, certainly points the way On the contrary, however a total extirpation of the tonsillar tissue offers naught but an ultimate cessation of both local and systemic derangements, and no one more fully appreciates this fact than I who was compelled to undergo operations by three different laryngologists before the tonsils were completely removed and a train of distressing symptoms permanently relieved

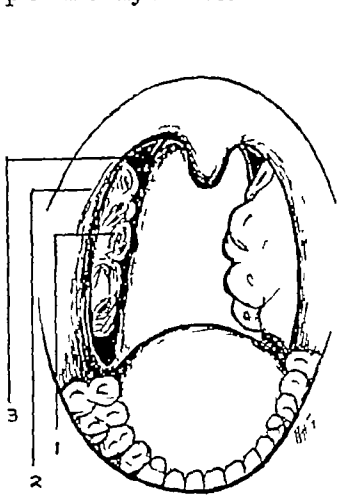


Fig 2.—Enlarged Lacunar Tonsils

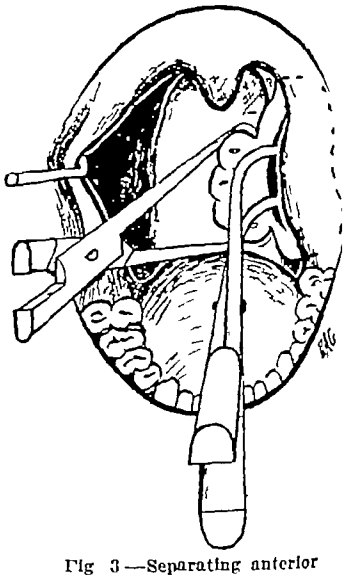


Fig 3.—Separating anterior pillar

In common with the experience of fellow-laryngologists, I realized that with the armamentarium which obtained until a few years ago it was impossible to effect a complete operation until an instrument was devised whereby the adherent pillars could be separated from the tonsillar tissue, preliminary to its removal, especially when the tonsils were submerged Thus it was, and still obtains in the practice of the unskilled, that in a majority of the cases there was a "recurrence" of tonsils, or, as the laity put it, "the tonsils grew in again," while the unfortunate sufferer experienced little or no improvement in his condition To the informed, however, it is evident that the faucial tonsils do not recur after complete removal, and that the return of former symptoms is due to a retention of some of the originally diseased tissue How often in advising a removal of tonsils for the correction of a pharyngeal or aural disorder have I witnessed that expression of mingled surprise and disgust as the unfortunate patient replied, "Why, I had my tonsils removed by Dr Blank and he charged me $10" Thus it was, prior to a few years past, that the operation was regarded by both the laity and general practitioner as a simple procedure which any one could perform, but with improved instrumentation and details of technic the complete removal of tonsils is now justly regarded as a serious and exacting operation which demands as much dexterity and skill as any major procedure to

* Read before the American Academy of Ophthalmology and Otolaryngology Aug 21 1906

secure proper results, and the compensation should be accordingly remunerative

IMPROVEMENT OF TECHNIC

Realizing the limitations of the knife, tonsillitome, and snare, several years ago, I devised a pair of scissors whereby the pillars could be severed from the tonsil, but even then I could not in all instances completely remove the base of submerged tonsils or the tissue which obliterated the supratonsillar space between the anterior and posterior pillars until I finally produced the present form of scissors (Fig 1) By means of this device the complete operation of separating the adherent pillars and removing the entire tonsil, either right or left, can be effected by the use of a single cutting instrument, as shown in the illustrations

Figure 2 pictures a characteristic throat in which the left tonsil is hypertrophied and the ducts distended, while on the opposite side are located the remains of an unskilful operation or the tonsil may represent a submerged variety It will be observed that the edges of the anterior pillars are darkened (reddened), showing that a chronic form of inflammation exists behind them whereby the pillars become adherent to the tonsillar tissue

With lightning rapidity, the artist has effected a complete removal of the right tonsils, as evidenced by the deep, empty tonsillar fossa which is more readily shown by a retraction of the anterior pillar (Fig 3) In the remaining cuts, the details of the procedure are fully illustrated When traction is applied to an adherent or submerged tonsil, the attached pillars are also drawn toward the median line so that the base of tonsil can not be reached until the pillars are severed from the tonsillar tissue In Figure 3 the anterior pillar is being separated by means of the scissors, although a curved knife may also be employed, but dense tissue can not be as effectually cut The dotted line indicates position of base of tonsil to which point the pillar must be loosened

After the anterior pillar is separated (Fig 4), the traction forceps are changed so that the tonsil is drawn forward and outward, when the posterior pillar is easily severed (Fig 5)

After both anterior and posterior pillars are separated as illustrated in Figure 6, the opposite angle of the mouth is retracted by an assistant and the tonsil is strongly drawn from its fossa toward the median line, while the scissors are introduced into the supratonsillar space and pushed in deeply so as to reach the base of the tonsil before beginning to cut In this manner the cavity will be left smooth and clean The incision is continued downward until the whole base of tonsil is separated In some instances matters may be facilitated by reversing the scissors and cutting upward from the bottom after the supratonsillar attachment is separated, or they may be introduced from the front and the pillars pushed away by the flat surface of the scissors, while the curved portion is forced deeply into the tonsillar fossa to reach the base of tonsil and complete the operation In many cases, owing to gagging movements of the patient, it may be necessary to remove the tonsil in several pieces, but in favorable instances the whole mass can be separated at once

In regard to the occurrence of hemorrhage, it has been my experience that the bleeding from a complete removal of the tonsils is not more profuse than when a partial extirpation is effected, inasmuch as the remaining soft tissues are favorable to a prompt contraction and retraction of the severed blood vessels, while an indurated mass which often remains after a partial removal tends to prevent a closure of the vessels and thus favors prolonged hemorrhage

While my scissors were devised primarily as a tonsil instrument, I have found them admirably adapted for enucleation of the eye, evisceration of the orbit and separating adhesions of the palate and uvula to the pharynx

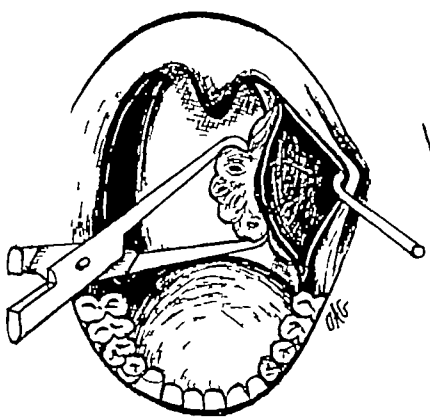


Fig 4.—Anterior pillar separated and retracted

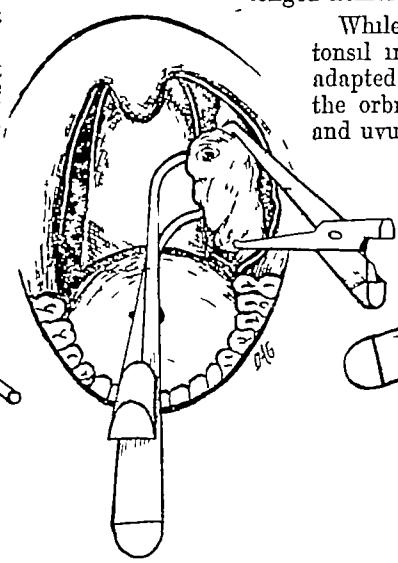


Fig 5.—Separating posterior pillar

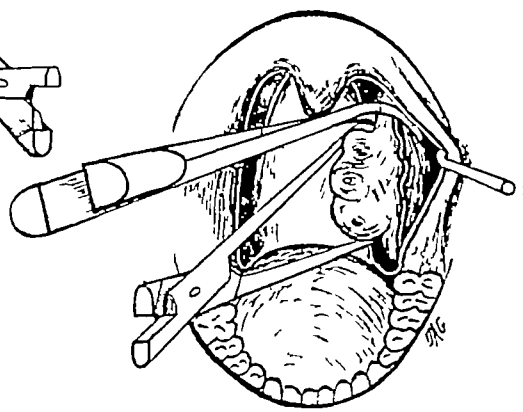


Fig 6.—Removing left tonsil

COCAIN CATAPHORESIS IN SURGERY

D T QUIGLEY M D
NORTH PLATTE, NEB

General anesthesia is dangerous and should be avoided in every case possible Not only the immediate effects, the chance of sudden death, but the after effects on the kidneys, heart, etc, must be carefully considered by the surgeon who has the best interests of his patients at heart. The subject of local anesthesia in surgery is much neglected by those who make a specialty of the art

I believe that nearly half the operations performed could be done with my method of cocain cataphoresis and with much greater safety and less worry to both physician and patient I have used the method for removal of tumors of the breast removal of lip for cancer and in operations for hernia hemorrhoids birthmarks moles, and epithelioma In fact, it may be used for any operation that does not involve the great cavities of the body or the hollow organs or when the part to be operated on is not too far from the surface to be reached by the cocain

TECHNIC

A piece of aseptic gauze, folded four times, is cut the size of the part to be anesthetized, and is laid on the skin, which has previously been made sterile. The gauze is then saturated with the following aseptic solution

Cocain hydrochlorate	3iss
Adnephrin or adrenalin sol (1 1000)	3ii
Sterile water q s	3ii

The adrenalin in the mixture closes the small blood vessels and *makes the operation nearly bloodless* The *secondary* hemorrhage which is reported to follow the use of adrenalin or adnephrin only occurs in about one case in four, and then it usually comes on after all the stitches are in If the edges of the wound are properly sewed both below the skin and in the skin itself, *very little blood will escape, and in no* case have I seen healing delayed by the use of any suprarenal extract or cocain, or by the combination of the two

The gauze saturated with the cocain adnephrin mixture is covered with metal foil and connected with the positive pole of the battery The circuit may be completed by the patient holding in his hand a wet sponge electrode connected with the negative pole, or better still, a large pad electrode may be used as the negative pole and attached by a bandage to the skin near the part to be operated on If on a limb, for instance, it may be attached on the opposite side from the positive pole and both may be held in place by the same bandage. This makes the body circuit shorter and lessens the resistance. If this is done, however, care must be taken to see that the skin is perfectly dry between the two wet poles on both sides, otherwise the current will follow the wet surface and will not go through the skin at all

The time required is from 15 to 30 minutes, and may be longer if necessary for deep effect, as in my experience with this method no effect whatever has been observed from the absorption of cocain even with the strongest solutions long continued It may be that the adrenalin causes the absorption to go on so slowly that no systemic effect is manifest, or it may be that the amount of cocain that penetrates the skin is too small to cause any noticeable symptoms At any rate, no general symptoms occur The phenomena manifested are entirely local

A battery of 20 or 30 wet or dry cells should be used, connected in series A rheostat to control the current is useful, but not absolutely necessary, as the current may be controlled in the absence of a rheostat by taking out or adding cells to the battery The current should be as strong as the patient can stand without discomfort, and as he can always tell whether the current is running or not, a milliamperemeter is unnecessary, as any break in the circuit will be detected at once by him

After the current is turned on the edge of the foil covered gauze should be turned back about every five minutes and fresh solution applied *as in order to get the best effect the gauze* ought to be kept well saturated

TECHNIC ILLUSTRATED

In using this method for hemorrhoids the gauze should be used over a cone-shaped metal electrode which should be large enough to have a dilating effect on the sphincter when pressed against the anus This electrode should have a wooden or hard rubber handle and should be pressed firmly into the anus by an assistant The sphincter will be considerably relaxed and the hemorrhoidal area anemic and deadened in from *20 to 30 minutes* If the hemorrhoids are large and pendulous the base of the tumor may be grasped gently between the blades of the forceps, each blade being wrapped with the gauze and the gauze saturated with the cocain solution The handle of the forceps is then attached to the positive pole and the circuit completed, and in a few minutes the tumor can be cut off without pain.

In birthmarks the area should be anesthetized by the above method, then the mark is stuck full of straight needles run just below the surface, and about one thirty second of an inch apart, a fine wire is threaded through the eyes of the needles and attached to the negative pole. The current is allowed to run until the spaces between the needles look cooked and white This destroys the birthmark and does not leave a scar

If moles are to be destroyed in this way any large coarse hairs growing in them must first be destroyed by the electric needle attached to the negative pole For the benefit of those who may not know how to tell the positive from the negative pole, I will say that all that is necessary is to dip the ends of the battery cords in a glass of water A large amount of hydrogen will come off at the negative pole and a small amount of oxygen at the positive pole

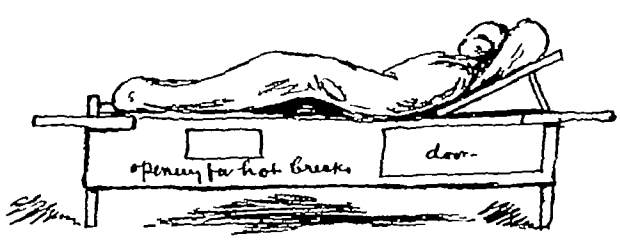
This method of local anesthesia is preferable to the Schleich infiltration method because it is painless, introduces no volume of foreign material beneath the skin, covers a wide area if necessary and is without danger of the systemic effect which one sometimes gets with even the most careful use of the infiltration method The anesthesia lasts over an hour, so that there is plenty of time to give the area operated on a second cleaning after the anesthesia is complete and before beginning the operation, which goes a long way toward producing an *ideal septic result*

Every hospital ought to be equipped for this kind of work and surgeons should use it whenever possible instead of general anesthesia

OPEN-AIR COUCH FOR INVALIDS

J MADISON TAYLOR, M.D
PHILADELPHIA

Many diseased conditions, acute as well as chronic, are being treated by an extended life in the open air The usual form of couch is the steamer chair or hammock No matter how much protection is used on them in the way of blankets, rugs, etc, the air circulates too freely under as well as over the patient In cold weather the chill of this double exposure is excessive I offer a



Open air couch, simple wood frame boxed in partly or wholly with or without handles detachable or hinged, openings under legs and feet to introduce hot bricks or hot water cans in extreme cold weather, opening in rear to hold extra wraps and various articles. Head rest may be adjustable or boxed in for warmth Slight elevation (removable) under knees to prevent sliding forward top on which patient lies, may be made of canvas stretched across cheaper than a mattress.

device which is comfortable, light, portable, cheap and does not permit the cold air to circulate under so freely It can be artificially heated if necessary Various modifications and improvements will suggest themselves

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False Doctorin'—An ancient villager, during an illness, refused to see a doctor, relying instead on a certain quack medicine The vicar urged on the man's wife that the conduct was almost equivalent to suicide.

"Yes, sir," replied the wife, "I know it, and many a time I have prayed against it in the church service"

"I don't quite follow you," remarked the clergyman, "are you talking about the prayers for the sick?"

"O, no, sir, I mean when we say in the litany, 'From all false doctorin', good Lord deliver us'"—*Saint James' Gazette*

New and Non-Official Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NON-OFFICIAL REMEDIES." THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY

(*Continued from page 611*)

(*A list of all accepted articles is published on one of the advertising pages of The Journal in the first issue of each month*)

RED BONE MARROW

Red bone marrow is a glycerin extract of the red marrow of bones. It contains about 2 per cent. of proteids and about 85 per cent. of glycerin.

It is a brownish liquid of an agreeable aromatic taste.

Actions and Uses.—The value of this preparation is believed to depend on a power to stimulate the formation of the red blood corpuscles.

It is recommended in simple and pernicious anemia.

Dosage.—4 to 8 Cc. (1 to 2 fluidrams) in water, milk or wine, three times a day.

Prepared by Armour & Co., Chicago.

SAJODIN

MONOIODOBEHENATE OF CALCIUM

Sajodin, $(C_{21}H_{42}ICOO)_2Ca$, is the calcium salt of monoiodobehenic acid.

It is prepared from erucic acid, $C_{22}H_{42}O_2$, by addition of hydrogen iodide forming monoiodobehenic acid, $C_{22}H_{43}O_2I$. This is converted into the calcium salt.

Sajodin is a colorless, odorless and tasteless powder, insoluble in water. On heating it generates an abundance of iodine vapor on exposure to light the superficial portion becomes yellow without material decomposition.

It should contain 26 per cent. of iodine and 4.1 per cent. of calcium.

Actions and Uses.—Although containing a smaller quantity of iodine than potassium iodide, sajodin is claimed to be equally efficient. It is said to have been proven exceptionally free from the unpleasant and deleterious by-effects of the iodides.

It is used for the same purposes as potassium iodide.

Dosage.—1 to 3 Gm. (15 to 45 grains) daily.

Manufactured by Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, and Farbwerke vorm. Meister Lucius & Bruening, Hoechst a. M., Germany (Continental Color & Chemical Co., New York). Patent and trademark pending.

SANTYL

SALICYLIC ESTER OF SANTOL. SANTALOLIS SALICYLAS

Santyl, $C_6H_4OH.COO(C_{15}H_{23}) = C_{22}H_{30}O_3$, is the salicylic acid ester of santalol.

According to the German patent the neutral esters of sandalwood oil are produced by heating the oil with the respective acid anhydrides and subsequent purification of the product.

Santyl is a yellowish oil with only a faint balsamic odor and taste; specific gravity 1.07 at 15° C. (59° F.); it boils under 20 mm. pressure at 121° C. (250° F.) to 126.6° C. (260° F.) with partial decomposition; insoluble in water but soluble in about 10 parts of alcohol.

It is incompatible with alkalies and with the usual incompatibles of sandalwood oil and of salicylates.

Santyl should possess the physical constants given above. On saponification with alcoholic sodium hydroxide it should yield approximately 40 per cent. of salicylic acid and 60 per cent. of santalol.

Actions and Uses.—It is said that santyl passes the stomach unchanged, but is slowly split up in the intestines into its constituents, santalol and salicylic acid. Santyl is claimed to have the same actions as sandalwood oil, except that because of the slow liberation of santalol, it produces no irritation of the gastrointestinal tract nor of the kidneys and urinary passages, nor any unpleasant odor or eructations.

It is claimed to be useful like santal oil for gonorrheal urethritis.

Dosage.—1.5 Cc. (24 minims) usually given in three capsules of 0.5 Cc. (8 minims) each, three times a day.

Manufactured by Knoll & Co., Ludwigshafen a. R., Germany (Knoll & Co., New York). German patent No. 173,240. U. S. patent applied for. U. S. trademark applied for.

SUPRARENALIN

EPINEPHRIN HYDRATE

The active alkaloid of suprarenal gland. See Suprarenal Alkaloid.

An organic base is used for the final precipitation.

Suprarenalin is a finely crystalline light yellow substance, odorless and very slightly bitter. It melts at 205° to 207° C. (401° to 404.6° F.). It is only slightly soluble in cold water or alcohol but readily soluble in acids and fixed alkalies. It is insoluble in ether.

Actions and Uses.—See Suprarenal Alkaloid.

Dosage.—Locally, 1-1000 to 1-15,000 solution. Internally, 0.3 to 2 Cc. (5 to 30 minims) of the 1-1000 solution every 2 to 3 hours. Hypodermically 1 to 15 drops of 1-1000 solution, diluted with sterile water.

Manufactured by Armour & Co., Chicago. U. S. patent No. 829,220.

SUPRARENAL LIQUID

LIQUOR SUPRARENALIS (P. D. & CO.)

Suprarenal liquid is an aqueous extract of suprarenal glands, preserved with 0.8 per cent. of chlorbutanol (chloretone). Each Cc. (16 minims) of the solution represents 1 Gm. (15.4 grains) of the fresh glands.

Actions and Uses.—See Suprarenal Alkaloid.

Dosage.—The preparation is used undiluted for spraying, especially for mucous membranes.

Prepared by Parke, Davis & Co., Detroit, Mich.

SUPRARENALIN OINTMENT

An ointment containing 0.1 per cent. of suprarenalin dissolved in a petrolatum base.

Actions and Uses.—It is recommended for application to mucous membranes, as the eye or the nose. The action is said to be slower but more lasting than that of the solution.

Prepared by Armour & Co., Chicago.

SUPRARENALIN SOLUTION

A 1:1000 solution of suprarenalin sulphite in normal saline solution free from other preservatives.

Dosage.—See Suprarenalin.

Manufactured by Armour & Co., Chicago.

SUPRARENALIN TRITURATES

Triturates composed of suprarenalin, milk sugar and boric acid in such proportion that each 0.03 Gm. (½ grain) triturate dissolved in 15 minims of water yields a 1:1000 solution.

Actions, Uses and Dosage.—See Suprarenalin.

Prepared by Armour & Co., Chicago.

(*To be continued*)

Naming of Carbon Compounds.—Referring to the method of noting derivation of formic acid

$$H-C(=O)-OH$$

thus formaldehyd is HCOH, formium.

—*Pharm. Era*, August, 1906.

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[For other information see second page following reading matter]

SATURDAY, FEBRUARY 23, 1907

THE TREATMENT OF DIABETES WITH EXTRACTS OF THE MUCOSA OF THE DUODENUM

In a previous editorial on the "hormones" we referred[1] briefly to the substance, "secretin," which Bayliss and Starling found as the specific product of the action of dilute acid on the mucous membrane of the duodenum, the function of which is to stimulate the secretion of pancreatic juice. Its effect on the external secretion of the pancreas is so very striking that the question at once arises. Does secretin have a similar stimulating effect on the internal secretion of the pancreas? In case the answer to this question is affirmative, then we may have in secretin a means of stimulating the impaired glycolytic processes in diabetes, since, according to the observations of Cohnheim, the internal secretion of the pancreas has as its function the activation of the glycolytic enzymes of the liver, muscles and other tissues. If, for purposes of discussion, we assume that secretin does increase the amount of formation of internal secretion by the pancreas, and that glycosuria depends on deficiency of this internal secretion, then we might have three possible causes of defective glycolysis and the resulting glycosuria. First, the duodenum might fail to form secretin, second, the pancreas may be so disordered that normally formed secretin can not stimulate it to an increased formation of its internal secretion, third, the liver and muscles may not contain the glycolytic enzymes which the pancreatic secretion normally activates. Therapeutic administration of secretin, prepared by treating the duodenal mucous membrane of swine or other animals with dilute acids, could have a favorable influence only in case the glycosuria depended on the first of these possible causes; conversely, if favorable results followed administration of secretin to diabetics, we should have grounds for looking for an unsuspected source of defective sugar metabolism, namely, defective formation of secretin by the duodenal mucosa.

The discovery of secretin, therefore, opens up an entirely new field of investigation in connection with diabetes, which has already been entered on by English observers who have been stimulated by the studies of Bayliss and Starling. The results that have been obtained so far are very suggestive, although still too few to be considered as at all conclusive. The first experimental administration of secretin in diabetes is credited by Starling to Spriggs, but the result in the one case reported was negative. Soon after, however, Moore, Edie, and Abram[2] obtained a marked lowering of sugar excretion in three cases of diabetes, although a similar favorable result was not obtained in all the cases in which this treatment was tried; more recently they report a few more positive results.[3] As they are careful to point out, even if secretin does increase the internal secretion of the pancreas, it can not be expected that secretin will have any effect in such cases of diabetes as are associated with marked pancreatic lesions. However, the fact that in a considerable number of cases diabetics are found to respond to the administration of secretin with a decreased elimination of sugar would seem to indicate that possibly it is true that in some instances diabetes may depend on a deficiency in the formation of secretin by the duodenal mucosa, presumably these would be the cases in which the pancreas is found at autopsy to be anatomically normal.

In support of this suggestion is the report of experiments made by Bainbridge and Beddard[4] to determine the formation of secretin in the duodenum of diabetics. These investigators, although unable to obtain favorable clinical results by use of secretin,[5] did demonstrate that in five out of six cases of diabetes little or no secretin could be obtained from extracts of the duodenum, although the duodenum of individuals dying from other diseases always yielded secretin. It is of importance that in all the six cases studied in this way the pancreas was found structurally normal. This observation is highly suggestive, since it offers a new and plausible explanation for those instances of diabetes in which the pancreas has been found normal at autopsy. It is also particularly interesting in that a new possibility for a successful therapy for certain cases of diabetes offers itself. Of course, even if absence of secretin is found to be the etiologic factor in the type of cases specified, it can not be hoped that secretin administration will have any considerable influence in those cases that depend on severe anatomic changes in the pancreas. We may also note that the secretin hypothesis throws absolutely no light on the problem of the importance or non-importance of the islands of Langerhans in the etiology of diabetes, for it is perfectly possible that secretin stimulates both parenchyma and island cells alike. It may be well, in closing, to emphasize the fact that these observations must be looked on as only the first preliminary gropings into a new field of research, and that we must await their further development and corroboration before entering on systems of treatment or hypotheses as to the etiology of human diabetes.

1 THE JOURNAL A. M. A. Feb. 9, 1907, p. 524.

2 Biochem. Jour., 1906, i, 28.

3 Ibid., 1906, i, 446.

4 Biochem. Jour., 1906, i, 429.

5 Foster recently reported similar unsuccessful results from the use of secretin in diabetes, while Dakin and Ransom obtained a transitory lowering of the sugar excretion in one case. Jour. of Biol. Chem., 1907, ii, 297.

THE FACTORS OF SAFETY

The lectures given under the auspices of the Harvey Society constitute a notable series This unique society is proving itself a most useful agency for the purpose of popularizing in the proper sphere the ideas and the knowledge of productive workers in various departments of scientific medicine. On account of its general interest the lecture by Dr Meltzer[1] on "The Factors of Safety in Animal Structure and Animal Economy" merits special notice The subject is in certain ways a novel one, and the distinguished lecturer deserves congratulation, not only for the originality of the choice of his subject but also on the highly successful manner of its presentation The wonderful capacity of the animal body to adapt itself to various changes of structure and condition, internal as well as external, has formed the theme of many addresses and receives more or less attention in connection with discussions of diverse pathologic processes, more particularly the reparative and inflammatory, but if we mistake not the question whether or not the animal machine is provided with factors of safety in the large sense that this term is used by Meltzer has received little or practically no systematic consideration from the physiologic point of view

Meltzer passes in review numerous organs and complex tissues, nearly all of which he finds are provided with apparently large margins of safety, over and above the maximum required by the normal activity This is brought out in an especially striking manner in the case of the reproductive organs In the central nervous system, however, the amount of tissue presiding over functions of vital importance is comparatively scanty, this tissue being, however, exceptionally well protected against injury on the one hand and against lack of blood on the other It is pointed out, furthermore, that the potential energy of many organs, e g, the heart, far exceeds the needs of normal life, that in the case of many functions the mechanisms necessary are doubled and even trebled, that the function of one organ may be assisted by other organs, and that living tissue is provided with a most important factor of safety which is peculiar only to living things, namely, the mechanism of self-repair The only exception of note to the last statement is found in the higher tissue of the central nervous system, the nerve cells possessing but insignificant power of reproduction

Finally, as regards the supply of food and of energy, Meltzer also shows that abundance, even affluence, appears to be a prominent feature To the question raised in the beginning of his lecture, "are the structures and functions of the living body provided with factors of safety?" we see that Meltzer is able without difficulty to give a positive, affirmative answer That these factors of safety promote the integrity of life the perpetuation of species, and have an important bearing on the process of natural selection needs no emphasis

Meltzer's valuable lecture contains much food for thought. Thus the somewhat exceptional status of the central nervous system as compared with other organs from the standpoint of factors of safety presents a puzzling problem, satisfactory solution of which now appears beyond our reach

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SENSATIONALISM AND CRIMINAL SUGGESTION

There has been no little discussion in the last few days as to the advisability of printing the details of criminal trials, marked differences of opinion have arisen as to whether such publication is likely to do good or harm A distinguished body of clergymen went so far as to announce publicly that they thought the detailed publication of the proceedings of a recent notorious murder trial were apt to be beneficial rather than harmful to the community, because they taught the lesson that "the wages of sin is death" The old idea that ignorance means innocence—an idea so long harbored by many well-meaning persons—is doubtless responsible for not a little evil When young folks are kept too sedulously from knowledge which they must have some time or other, and which will come to them prurriently, if not given directly and candidly, the result is sure to be harmful Whether or not this important principle applies to such information as is obtained from the sensational details of a murder trial involving the worst kind of sexual problems, however, is extremely doubtful

What must be remembered particularly in this discussion, and what is most likely to fail of appreciation by any but physicians who have been particularly interested in psychic manifestations, is the power of suggestion to familiarize minds of minor resisting power with evil and perhaps to lead them to the commission of it, while the lack of such suggestion would have left them free to follow their own devices It might be thought, for instance, that the publication of the details of suicides would tend to lead others who have thoughts of self-destruction to avoid such emotional strains and distressing circumstances as might predispose them to it On the contrary, we know that the reports of suicides constantly suggest to other persons who lack mental stability to go and do likewise If some special form of self murder be indulged in and its features are exploited by the newspapers similar cases are practically always reported from other parts of the country during the course of the next few weeks This is particularly true with regard to the double crimes of murder and suicide that have become so frequent in recent years

With regard to other crimes besides murder and suicide the power of suggestion is likely to be even stronger There is a natural abhorrence from the taking of human life that represents society's strongest safeguard against such fatal incidents On the other hand, there is a morbid tendency for most of the sexual crimes, especially in individuals of abnormal mentality, that **makes** read-

1 Page 675 this issue

ing about them and the consequent increased familiarity with them an impelling motive toward actual experience This is the side of human nature that is particularly likely to be affected by detailed reports of sensational trials If all men were perfectly normal then the lesson of such stories would be read aright and the moral effect would be rather for good than for evil As it is, a very large proportion of the community can not be considered quite normal It is especially these more or less morbid persons, however, who have a special pathologic curiosity that tempts them to luxuriate in details of criminal proceedings It is this which brings so many of them, even though they are women, and the ordinary feelings of shame might be expected to deter them, into the publicity of a court room in order to indulge their morbid feelings

In a word, besides the younger people who have not enough experience to guide them to what may or may not be good for them to read, we have always with us a large number of "children of a larger growth," who will never be quite grown-ups in the sense of stability of character and rectitude of purpose, who must be protected from the morbid suggestion which comes to them from a sensational press It is this side of the present discussion that physicians, better than any others, can appreciate, and all the weight of their influence should be thrown into the scale to save people from evils that are quite as sure to do them harm as would be contact with contagious disease or insanitary surroundings

FROM EXORCISM TO PERSUASION

Some form of psychotherapy has undoubtedly been in use since the beginning of the race The priest-doctor, when dealing with a mind diseased, would try first exorcism, hoping thus to expel the devil or demon that was possessing the patient Failing in this he would employ some such pharmacotherapy as the administration of asafetida, and the prognosis was indeed bad when an evil spirit could remain in a body saturated with this substance

The thoroughly scientific Hippocrates appreciated and no doubt experienced the value of suggestion In the middle ages Paracelsus, "who was not altogether a quack," employed "magnetic healing" Mesmer, a century ago, was able to convince the most brilliant and intellectual minds in Europe of his powers Then came animal magnetism, the assumptions made for the theosophy of Madame Blavatsky, spiritualism, Dowieism and Eddyism as curative agencies So that to-day hundreds of "faith cures" "mind cures," mental healing and the like infest our civilization

Nevertheless, these charlatanries have had their uses, in that they have attracted the attention of wise and honest men to such study of mental processes as might lead to the formulation of a rational psychotherapeusis Thus the labors of Beard, Myers, Charcot and their colleagues evolved hypnotism It was presently found, however, that this might prove a dangerous agency in the hands of the incompetent or of the unscrupulous, by its means another psychosis might be substituted for that which it was sought to dissipate

The superb "psychoanalytic" of Janet and the labors of such men as Dubois and Jastrow followed, so that suggestion, by which we seek to influence the subconscious mind, is now much in vogue as a psychotherapeutic measure In contradistinction to this is the method of "education, explanation and persuasion," which Barker[1] has advocated and used with success

It appears to Dr Barker that the main difference between suggestion and persuasion lies in their relation to the higher psychic functions In suggestion these higher functions are either not utilized or they are inhibited (the suppression and substitution of Janet) In persuasion, on the other hand, they are called into action, the mind being won over by the presentation of suitable reasons and not "by the exertion of authority, force or fear"

Which of these methods is correct? In the present transitional state of our knowledge and experience, the scientific physician must judge The psychotherapy must be as varied as the variety of cases to which it is applicable For one individual persuasion may be appropriate, for another suggestion, there are cases in which even hypnotism may have to be induced

Psychotherapy is applicable in hysteria with its most varied and protean manifestations, in psychasthenia and neurasthenia, when there is psychic incompleteness or physiologic insufficiency, for the obsessed (or the possessed, as Barker would prefer to term them), in nervous crises, in such gastropathies as anorexia and "nervous dyspepsia," in insomnia, in psychoneuroses and in all abnormal states of a functional sort which have not as a basis organic or structural lesions Even with regard to the latter, however, we may often combat functional disturbances associated with organic diseases, such as tabes and heart and lung affections

A very essential preliminary to a rational psychotherapeusis is an exhaustive diagnosis It is worse than absurd to try to dissipate, by suggestion or persuasion, a headache which is dependent on an insufficient eye muscle, a nasal spur or an inflamed sphenoid, or a pain in the chest which is due to an incipient tuberculosis, or one in the pelvis which has for its origin a lesion which only the surgeon can remedy by operation

TO ABOLISH SMALLPOX QUARANTINE

The resolution[2] of the Minnesota State Board of Health not to use quarantine after Jan 1, 1908, in the attempt to control smallpox has the aspect of an extreme

1 Barker Experience with the Simpler Methods of Psychotherapy and Re-education Amer Jour Med Sci October 1906
2 Minnesota news this issue page 705

measure The idea of not quarantining smallpox patients will naturally come as rather a shock to the average layman, and it is surprising that the proposition absolutely to do away with this precaution (after a certain date when the public comes to realize its meaning) has caused so little stir and comment To any medical man who considers the subject, however, it is self-evident that quarantine ought to be unnecessary An accidental case of smallpox should have no terrors for a well-vaccinated community It should be no more serious in its consequences than the half dozen other diseases that are about equally contagious and which no one dreads The experience of certain well-vaccinated people, those of Prussia, for example, shows that even the mildest cases of varioloid are practically unknown if the one reasonable precaution is taken The abolition of strict quarantine does not necessarily mean that there should be no notification or placarding of infected places The public should have fair warning, as heretofore, but the restrictions in personal liberty should be done away with We presume some such course will be followed in Minnesota next year when the rule goes into effect. The recent activity of health boards in various parts of the country has stirred up opposition and the antivaccinationists are at present unduly active There is even danger that wholesome vaccination regulations will be repealed in some sections, and bills have even been introduced in one legislature making the demand for a vaccination certificate a crime It is not that the antivaccinationists are not afraid of smallpox, but they seem to be more afraid of vaccination As it is, health officials are seriously embarrassed and smallpox spreads The abolition of legal quarantine would put the public more on its guard and lay the responsibility on the antivaccinationists The public might come to demand general vaccination more urgently if it felt that to be the only real protection, being no longer able to trust in the inefficient and deceptive quarantine method This, we take it, is the view taken by the Minnesota board It sees no use in trying to check smallpox by quarantine if vaccination can not be generally enforced There is much justice in this view If we are not allowed to protect innocent children by the one sure method that has stood the test of a hundred years, we can not protect them any other way The common claim of the antivaccinationists is that smallpox is a filth disease controllable by general sanitation and cleanliness We would be glad to see cleanliness enforced among the antivaccinationists themselves, but its impracticability is self evident Even if it were not so, a trust in it on their part would be an admirable object lesson so far as smallpox is concerned when compared with vaccination No state in this country grants health boards the powers they would require to stamp out filth diseases absolutely, and smallpox is not really one of that type The Minnesota board's resolution has much to be said in its favor and it will be interesting to observe its effects

CONSENT TO OPERATION

The decision[1] of the Supreme Court in the case of Pratt vs Davis emphasizes the necessity of surgeons having a clear understanding of their legal liabilities in undertaking important operations and the prudence of requiring explicit consent of the patient or his legal representative before beginning an operation The decision covers three principal points of interest to surgeons 1 What is sufficient consent to an operation? 2 How much is implied in consent once given? 3 What is the privilege and duty of the surgeon in emergencies arising in the course of an operation undertaken with previously obtained consent? When a patient is in full possession of his mental faculties his personal consent to a surgical operation on himself is a necessary prerequisite It is obvious that this consent should be obtained after a clear presentation of the necessary facts in the case, and it would seem to be a judicious precaution to obtain such consent in writing Unfortunately, the testimony in the case cited showed an attempt at deception that seems to have been imprudent even if it might at the time have seemed justifiable It would appear from the decision that whatever may be the implication involved in consent to one operation, it can not be held to extend to a second operation, but explicit consent to this should be obtained The decision on the third point is of great importance as it tends to put the duties of the surgeon in the course of an operation already undertaken in a clearer light It is the duty and the legal right of the surgeon in the presence of unexpected conditions arising in the course of an operation to use his highest skill and judgment even if the consent of the patient or of his representative can not be obtained It is also right and the duty of the surgeon to act in accordance with the best teachings of surgery in emergencies in which consent can not be obtained even to the extent of performing operations

1 Abstracted in Medicolegal Department this issue page 720

THE ECONOMIC VALUE OF LIFE

The average American gives so little heed to the vast economic waste that goes on yearly, due to the maiming or killing of workmen, that it has become a trite truism that in the United States the cheapest commodity on the market is human life That this should be so is a grave economic, not to say social, error Far-sighted employers are beginning to realize that the warp and woof of our economic fabric is weakened and destroyed when working conditions are such as to be a standing menace to the life and safety of the workers Not only in the operation of machinery, however, is there danger The exigencies of modern industrial life have produced many trades that are distinctly dangerous to the workers in them Lead poisoning is a positive sequel to employment in factories where storage batteries are made, ptyalism is of the commonest occurrence among the women and girls working in hat and silk factories—and the list could be extended indefinitely We feel therefore that the exposition which was held recently in New York City,[1] where were shown the many devices on the market for the protection to life and limb of industrial workers was most opportune It is high time that the indifferent public be awakened to the enormous lo s

1 The Exposition of Safety Devices and Industrial Hygiene held at the American Museum of Natural City Jan 20 to Feb 12 1907

entailed by these needless sacrifices Men are of more value than things—life is a greater asset than property —and any nation that persists in remaining blind to these facts must sooner or later fall behind in the race for commercial supremacy Concretely it may be worth remembering that in New York City alone there is a daily average of nine violent deaths from preventable causes In the United States, declares the American Institute for Social Service, we kill in industrial accidents every four years 80,000 more people than fell in battle and died of wounds on both sides during the four years of the Civil War These figures help us to realize the price we pay for our commercial prosperity and give some idea of our wasteful prodigality in that plentiful commodity—human life Devices that lessen the liability to accident and expositions that awaken the public conscience to the need of the installment of such devices are to be welcomed It is to be hoped that the time is not far distant when the worker in the mine or in the factory may earn his living with a reasonable degree of safety to life and limb

PSYCHIATRIC CLINICS IN HOSPITALS FOR THE INSANE

Resolutions have been introduced by the speaker of the Illinois House of Representatives condemning the psychiatric clinics in one of the state insane hospitals He has, moreover, used his privilege as speaker to refer it to the committee which controls the appropriations for such institutions The ostensible ground of objections is the use of the inmates of the institution in these clinics under the assumption that such use is an ignominy and a hardship to those unfortunates Considering the fact that the institutions are designed primarily not merely for the benefit of their inmates but for the prevention and cure of the growing evil of mental disorder the state, the view of their functions as embodied in his resolution seems a narrow one Only by a better knowledge of insanity on the part of the medical profession can we expect to wage a successful campaign against the spread of mental disease, and the use, for professional instruction, of the material at the state's command, would seem to be most reasonable The assumption is, moreover, unjustifiable that by such utilization the recipients are subject to humiliation or abuse Those attending such clinics for the acquirement of scientific knowledge are not such as would utilize the opportunity for trifling In fact, the publicity that these clinics involve as to the treatment and management of the insane is an insurance against the mistreatment and neglect that have been charged, justly or unjustly, against our asylums in years past The more the medical profession generally can know of the inside of these institutions and of the treatment given there, the better for the welfare of the patients in them and for the interest of the public which supports them It is not hard to see how the scientific utilization of these institutions for the benefit of the patients and of the public might be inimical to the interests of those who consider them mainly as places for the bestowal of political patronage —and that idea has been at least one of the causes of nearly every asylum scandal in this country—but of its ultimate value to the insane there can be no question In this connection it may be of interest to note that the former head of the institution, who was superseded by the present incumbent, lives in the speaker's district. The more public the institutions are to those who are sanely and honestly interested in their work the better for all concerned and especially for the inmates The hospital specifically concerned in the resolution is under the management of one of the most competent and progressive alienists in the country, and the clinics against which the resolution is directed were started solely for the purpose of enlarging the usefulness of the institution, not only to the inmates but also to the state which maintains it It is in the direct line with the recommendations of the State Board of Charities and has been indorsed by Governor Deneen It would be a pity if any resolution, with cheap pretense of philanthropy, incited either by gross ignorance or some ulterior political motive should be given any serious consideration by the legislature The study of insanity is one of the most serious problems of the day, and humanity can be best served by utilizing every legitimate means of acquiring knowledge of it The resolution exhibits neither sense nor humanity, but, as a distinguished practitioner says in a letter to the governor, calls us back to eighteenth century madhouse methods Psychopathic clinics have proved their value abroad, and their more general adoption in this country, wherever competent men can be found to conduct them, would be of signal service to humanity

Medical News

ARKANSAS

Society Meetings—At the annual meeting of the Fourth Councilor District Medical Society, held at Monticello, December 19, the society freely discussed the matter of sewerage system, septic tanks, cesspools, etc.——At the annual meeting of the Yell County Medical Society, held in Dardanelle, December 11, Dr M A. Worsham, Centerville, was elected president, Dr S E Miller, Dardanelle, vice president, and Dr A. H. McKenzie, Dardanelle, secretary treasurer——At a recent meeting of the Union County Medical Society, held in El Dorado, the following officers were elected President, Dr John Moore, Lisbon, vice president, Dr S E Thompson, secretary, Dr J B Wharton, treasurer, Dr J M. Sheppard, delegate to the Arkansas State Medical Society, Dr H H. Neihus, alternate, Dr E T Hamm——The Drew County Medical Society, at its annual meeting in Monticello, December 19, elected Dr W A Brown, president, Dr Sidney Harris, Wilmar, vice president, Dr A. S J Collins, secretary treasurer, and Dr J R Tarrant, censor

ILLINOIS

Sanatorium Opened.—The Edward Sanatorium for the Treatment of Incipient Tuberculosis, Naperville, built and endowed by Mrs Eudora Hunt Spalding, Chicago, is now open, 10 patients having been admitted The present capacity of the sanatorium is 15 No charge is made for treatment

Personal.—Dr Henry G Schmidt, Elgin, has been appointed physician to a mining company in Torreon, Mexico——Dr and Mrs Joseph R Waln, Peoria, have gone to Florida for two months——Dr Joseph H. Roy, Kankakee, was thrown from his buggy in a collision with a trolley car February 8, and painfully injured——Dr Ernest B Mammen, Bloomington, is about to take a trip to Europe——Dr Cassius M Craig, Champaign, has returned home after several weeks spent in a Chicago hospital, where he underwent operation

Society Meetings.—At the annual meeting of the Wabash County Medical Society the following officers were elected Dr Robert J McMurray, St Francisville, president, Dr Sereno W Schneck, Mount Carmel, vice president, Dr Richard S Manley,

Mount Carmel, treasurer, and Dr George C Kingsbury, Mount Carmel, secretary The society adopted resolutions endorsing the position taken by the American Medical Association and the Illinois State Medical Society regarding the compensation for life insurance examination——The Physicians' Club of Lincoln held its annual session January 18 and elected the following officers Dr William W Houser, president, Dr Walter W Coleman, vice president, Dr Harry S Oyler, secretary treasurer, and Drs Lucian L Leeds, James L. Lowrie and Calvin C Montgomery, trustees——At a meeting of the Christian County Medical Society, held in Taylorville, January 17, the following officers were elected President, Dr J J Connor, Pana, first vice president, Dr J H Dickerson, Taylorville second vice president, Dr Dwight F Morton, Taylorville, secretary treasurer, Dr D D Barr Taylorville, censors, Drs E H. Douglas, Taylorville, J N Nelms, Taylorville, and William T Bridge, Stonington finance committee, Drs T A Lawler, H M Woolf, Taylorville

Bills in the Legislature.—Among the bills introduced in the senate and house is one providing for a state sanatorium for tuberculosis, one to regulate the practice of osteopathy, a bill to amend the embalmer's bill, one to amend the law in relation to coroners, one to provide for the testing of the sight and hearing of the pupils of public schools one to regulate the sale of narcotics and drugs, one to promote the care and curative treatment of the insane, one to provide for moral and humane education in public schools, one making appropriations for the Illinois State Colony for Epileptics, one to establish an institution for the surgical treatment of children, one to prohibit the collection of second hand bottles or jars one making it unlawful to sweep cars or coaches while occupied by passengers, one regulating the manufacture and sale of proprietary drugs and medicines, one preventing fraud in the sale of dairy products, one prohibiting the sale of adulterated or misbranded food and drugs, one to regulate the practice of barbering in the state, and one for the licensing of cold storage warehouses and the marketing of goods placed in cold storage

Antituberculosis Campaign.—A lecture by Dr William A Evans of Chicago on "Tuberculosis" was delivered before an audience that packed the Auditorium in Jacksonville The lecture was given under the auspices of the Woman's Club and of the Jacksonville Society for the Prevention of Tuberculosis Very great interest in tuberculosis is being manifested in Jacksonville This is largely due, no doubt, to the aggressive campaign instituted by the society above mentioned This society, in addition to having lectures delivered on the subject also publishes, for free distribution, a terse little pamphlet setting forth, in easily understood language, the prophylaxis and treatment of the disease

Chicago

Physicians on Ambulances—On February 18 physicians were for the first time assigned to city ambulances Sixteen physicians are employed at a salary of $100 per month The service is under the charge of Dr George Hunt of the health department

Mortality—Deaths from all causes for the week ended February 16 numbered 698, equivalent to an annual death rate per 1,000 of 17 27 Pneumonia caused 156 deaths, consumption, 72, heart diseases, 60, scarlet fever, 39, nephritis, 37, acute intestinal diseases, 28, cancer, 24, nervous diseases and violence (including suicide), each 22, diphtheria, 11, and measles, 4

Infectious Diseases—The report of the health department for the week ended February 16 shows a continued decrease in the number of infectious diseases The diphtheria cases reported number 150, or 60 less than for the previous week, scarlet fever, 386, a reduction of 234, and measles 130, a decrease of 14 The total number of infectious diseases for the week was 704, or 324 less than was reported for the previous week

Personal.—Dr Edwin W Ryerson has been appointed attending orthopedic surgeon at St Luke's Hospital and orthopedic surgeon at the Children's Memorial Hospital——Dr Samuel L McCreight and family who spent the winter in Los Angeles, have returned to Chicago—Dr Charles Adams has been very ill this week——Dr William A Evans, who has been seriously ill with influenza at Grace Hospital, is improving

Health Department Inquires About Fourth Disease—Dr Charles J Whalen, commissioner of health, has prepared circulars to be sent out to physicians in the city who have reported cases of scarlet fever and measles requesting reports on the cases and giving facts concerning symptoms that will aid in explanation of the phenomena called "fourth disease" or "Duke's disease" The circular takes the same stand that THE JOURNAL took editorially Feb 9, 1907, page 526, namely that the 'fourth disease" has not been established as a clinical entity Dr Whalen hopes that this inquiry may contribute to the knowledge on the subject

IOWA

Personal—Dr Charles E Ruth, professor of the principles and practice of surgery and clinical surgery in Keokuk Medical College, Keokuk, has resigned, on account of his wife's health, to take effect at the close of the present session of the college.——Dr David S Fairchild, Sr, Clinton, is recovering from the effects of septicemia caused by the infection of a finger during an operation——Dr Frank H Cutler, Cedar Falls, has been appointed lecturer in electrotherapeutics at the University of Iowa, College of Medicine, Iowa City, a new position recently established.——Dr Abel Ford, a retired practitioner of Le Grand, was thrown from a sled recently and sustained concussion of the brain He is expected to recover

KENTUCKY

Typhoid Epidemic—Typhoid fever is reported to be epidemic in Bath County, where numerous cases have occurred with several deaths

Tuberculosis Hospital Work Hampered.—The Fiscal Court of Jefferson County failed to make a levy for the maintenance of the Tuberculosis Hospital, which will greatly handicap the work of this much needed institution

Personal—Drs Henry V Pennington, London and George S Brock, Bush, have gone to Europe——Dr David T Stuart, Paducah, has accepted the presidency of the Blake Hospital, Hang Chow, China, and sailed from Seattle, February 5

Empowered to Revoke.—By order of the General Assembly, the State Board of Health is empowered to revoke the license of any physician proved guilty of having performed an abortion and also of any physician who becomes addicted to liquor or drug habits to a degree which disqualifies him to practice with safety to the people

Milk Certified—The Jefferson County Medical Society milk commission is now "certifying" to the purity of the milk from three dairies, all precautions prescribed by the commission in regard to the production, care in handling, shipping, cows, barns, etc being carried out. The latest development in the milk situation is the advertisement by a distributor of "certified" milk, the purity of which is certified by two physicians and a veterinarian probably under salary The city health department is preparing also to certify dairies which come up to the requirements of the Jefferson County commission's standards The arousing of public opinion by the crusade against swill feeding and in favor of pure milk will give a better supply in general

Society Meetings—At the quarterly meeting of the Kentucky Midland Medical Society, held in Louisville, January 10, Dr Charles W Kavanaugh, Lawrenceburg, was elected president, Dr Nevil M Garrett, Frankfort, vice president, and Dr George P Sprague, Lexington secretary treasurer——At a meeting of the Graves County Medical Society, held in Mayfield January 15, the following officers were elected Dr Benjamin F Morris Mayfield, president, Dr John F Kirksay, Sedalia, vice president and Dr Herbert H Hunt, Mayfield, secretary treasurer——The Clark County Medical Society at its meeting at Winchester, January 12 elected the following officers Dr Samuel W Willis, president, Dr Howard Lyon, vice president, Dr Ernest Cole, secretary treasurer and Dr Samuel W Willis, delegate to the state society, all of Winchester——A meeting of the Central Kentucky Medical Society was held in Danville January 24 and the following officers were elected President Dr John M Acton, Lancaster vice president Dr John C Bogle Danville, and secretary treasurer, Dr J Thomas Price, Harrodsburg

Colleges Merge.—An announcement was made February 14 of the consolidation of the medical departments of Kentucky University and University of Louisville In consideration of the sum of $40 000 the University of Louisville purchases the buildings of Kentucky University its good will and equipment and the two faculties are combined The fa the school will be composed of the following Sherrill W D Willmoth W O Roberts T Henry Enos Tuley William B Doherty obstetrics T C Evans and J M Ray throat, Adolph Pfingst and Edward Pal Woody and R. B Gilbert pediatrics J

Cecil, medicine, W E Grant and J M Bodine, anatomy, Louis Frank and Turner Anderson, abdominal surgery, L L Solomon, Virgil Simpson and H. A Cottell, materia medica and therapeutics, H M Goodman, chemistry, C W Hibbitt, gynecology, O H. Kelsall, genitourinary diseases, Bernard Asman, diseases of the rectum Kentucky University will continue its present session until its close in its present quarters, when its class will be graduated and diplomas issued by the University of Louisville The present buildings will then be used by the University of Louisville as its academic department——An announcement has just been made of the consolidation of the Louisville Medical College and the Hospital College of Medicine, the latter being the Medical Department of Central University The buildings of the Louisville Medical College will be used, the buildings formerly used by the other college reverting to the university The consolidated college will be known as the Medical Department of Central University The details of the merger have not been completed, but it is very likely that Dr L S McMurtry will be president of the combined faculties The following physicians will compose the faculty of the new college P R. Taylor and William Cheatham, eye, ear, nose and throat, L. S McMurtry and A M Cartledge, gynecology and abdominal surgery, F C Wilson, S J Meyers and B F Zimmerman, medicine, S G Dabney and Ellis Duncan, physiology, E G Burnett, nervous diseases, Edward Speidel and H B Ritter, obstetrics, H H Grant, G A Hendon, W C Dugan, Irvin Abell, surgery, J E Hays and C. W Kelly, anatomy, Harris Kelly, chemistry, H N Leavell, pediatrics, Bernard O'Connor, pathology and bacteriology

MARYLAND

Society Elects Officers—A meeting of surgeons of Maryland Division of the Western Maryland Railroad from Baltimore to Cumberland was held at Hagerstown, January 22 Dr D Z Dunnott, Baltimore, presided, about 40 attended and a permanent organization was effected with the following officers Dr Daniel Z Dunnott, Baltimore, chief surgeon of the Western Maryland Railroad, president, Drs J McPherson Scott, Hagerstown, and E H. Parsons, Piedmont, W Va, vice presidents, Dr Joseph T Hering, Westminster secretary treasurer

Baltimore

Add to Endowment Fund—Johns Hopkins University received $150,000 from the estate of the late Charles L Marburg, 100,000 of which goes to the hospital and $50 000 to the university The original endowment fund of the hospital was $3,326,000 which through careful investment and management has increased more than a quarter of a million dollars

MASSACHUSETTS

Medical School Property Sold.—The old Harvard Medical School site on Boylston Street has been sold to the trustees of the Boston University for $596,000

Improve Water Supply—The State Board of Health has recommended that the water supply of Lynn be improved at an estimated cost of $400,000, by the establishment of a filtration plant which will give 2,500,000 gallons of pure water per day

Floating Hospital Needs Funds—Owing to the demands on the Boston Floating Hospital, due to the unusual amount of sickness during the past summer, the hospital has incurred considerable debt The trustees make an urgent appeal to the public for an appropriation of $10,000 which is needed

Epidemic Diseases.—Amherst College, with five cases of scarlet fever, one of which has proved fatal, has been ordered closed till March 1——Wheaton Seminary, Norton, with 26 cases of the same disease, has also closed——Rumors of an epidemic threatening Harvard University prove to have no basis

Hospital Reports.—Carney Hospital reports 55 497 patients treated in the out patient departments in the last year and 2,145 house patients Of these, 1,174 paid full rates and only 550 paid nothing The charity work, however, is rapidly increasing——The New England Baptist Hospital reports its last year's work just ended A new ward is to be erected At present there are five free beds——The New England Deaconess Hospital cared for 250 patients last year, one third being free The new hospital in Longwood is fast approaching completion

Disease and Death.—For the ten weeks ended February 9, there were reported 2,424 deaths in Boston an increase of 233 over the corresponding period of last year There were 566 cases of diphtheria, with 39 deaths, 760 of scarlet fever with 9 deaths, 76 of typhoid fever, with 15 deaths, 159 of measles, with 2 deaths, 409 of tuberculosis, with 241 deaths There were 387 deaths from pneumonia, 11 from whooping cough, 302 from heart disease, 64 from bronchitis, and 25 from marasmus Of those who died 372 were infants under 1 year, 510 under 5 years of age and 684 more than 60 years old

Bequests—A gift of $25,000 to the Lawrence City Hospital, under the will of the late Helen G Coburn, Boston, for the maintenance of free beds for patients from Andover will be paid by virtue of a decision of Justice Morton of the Supreme Court——By the will of the late Charles F Farrington Harvard Medical School will receive $50,000 to advance the knowledge of infectious, communicable and kindred diseases——Should the heirs of the late George F Fabyan, Brookline, die without issue his estate, said to be worth several millions of dollars, will go to the Massachusetts General Hospital, Harvard University, Children's Hospital, Perkins Institute for the Blind, the Boston Home for Incurables and other institutions As six heirs still live, the possibility of these institutions receiving any portion of the estate is believed to be remote

Society Meetings—The Haverhill Medical Society celebrated its twentieth anniversary February 7 by a banquet Dr Maurice D Clark presided and Dr Charles E Durant was toastmaster——At the semiannual meeting of the Essex North District Medical Society, held in Haverhill, January 2, resolutions were adopted favoring the work of the Council on Pharmacy and Chemistry of the American Medical Association——At the winter meeting of the councilors of the Massachusetts Medical Society, held February 6, Dr George C Sears, Boston, chairman of the committee on state and national legislation, asked that suppport be given to the bill giving authority to school physicians only, to sign releases from vaccination of school children and to the bill similar to the national food and drugs law, for labeling proprietary medicines and food products Dr Ralph H. Seelye, Springfield, and Drs Cook and Cabot, of Boston, were elected delegates to the American Medical Association, with Drs Perley P Comey, Worcester, Charles A Porter and Richardson, Boston, alternates

Personal.—Dr Harry E Sears, Beverly, has been appointed associate medical examiner for Essex County——Dr Walter J Marcley has resigned as superintendent of the Massachusetts State Sanatorium Rutland, to take charge of the new State Sanatorium of Minnesota, at Walker——Dr Charles L. Moran, Boston, house officer of the south department of the Boston City Hospital, is ill with erysipelas——Dr William L Thompson has been elected district physician to the Boston Dispensary——Dr Harry M Stoodley has been appointed medical inspector of the Somerville public schools, vice Dr Warren D Ruston, resigned——Drs H M Adler, G W Hall, W B Robbins and C T Overlander have been appointed assistants in the clinical laboratory work of the Harvard Medical School.——Dr Gilman Osgood, Rockland, has been appointed medical examiner for the second Plymouth district, vice Dr Henry W Dudley, Abington, deceased——Dr William L Richardson, Boston, has been appointed a member of the board of trustees of Perkins Institute and Massachusetts School for the Blind

MICHIGAN

Nurses' Home Open—The Nurses' Home, given by Mr and Mrs Charles H Davis, Saginaw, has been opened in connection with the Saginaw General Hospital The building is of vitrified brick, 44x72 feet, and three stories in height steam heated, lighted by electricity and thoroughly equipped.

Personal.—Dr Edward A Florentine Sidnaw, has moved to Saginaw and will practice with his father, Dr Frank B Florentine——Dr H. Beach Morse, Elk Rapids, has been appointed physician for Elk Rapids and Milton townships, Antrim County——Dr Howard A Osborne, Detroit is convalescent from a severe attack of scarlet fever——Dr Robert W Alton, Portland has returned after a three months health trip to New Mexico——Dr William H Dodge Hancock is taking a trip to Mexico and California——Dr James H Hudson, Merrill is at St Mary's Hospital, Saginaw, for treatment

To Restrict Criminal Abortion—Dr F J W Maguire has drafted a bill which is now before the legislature, proposing to make it a criminal offense to solicit a physician to perform an abortion or for any one to procure an abortion on herself or on any other pregnant woman without the consent and advice of at least two physicians The public education intended by this bill is admirable and the good effects of such legislation would be by no means confined to those resulting from the conviction of persons violating the law The physician would be largely relieved from insulting proposals for him to interfere with the course of pregnancy, and would be able to point to the law as the expression of a higher standard of morality than that of many of the laity

MINNESOTA

To Abolish Smallpox Quarantine—The Minnesota State Board of Health voted to abolish quarantine for smallpox after Jan 1, 1908, because vaccination is a sufficient preventive of infection This plan is the subject of editorial comment in this issue.

MISSOURI.

Anniversary Banquet.—The Society of German Physicians of St Louis celebrated the twenty fifth anniversary of its organization by a banquet Dr Gustav Baumgarten, one of the founders of the society, spoke on the history of the society, and a silver writing set was presented to Dr Edward Evers, who for 18 years has been the most efficient secretary of the organization

Personal.—Dr Charles E. McBride has been appointed physician for the Webb City district of Jasper County, vice Dr Ernest H Bair, elected coroner, and Dr William J Willim, physician for the Joplin district of the same county——Dr James M Buchanan, St Louis, has been appointed district medical examiner for the United States Civil Service Commission——Dr J M Marks, house surgeon of the Wabash Employé's Hospital, Moberly, has resigned, to be succeeded by Dr C M McCumber of Chicago——Dr James A B Adcock, Warrensburg, has been re elected secretary of the State Board of Health——Dr John F Osborn has been appointed assistant health officer of St Joseph

St. Louis Medical Society—*On January 28 the society* listened to a lecture by Dr Herman Von Schrenk on "Present Problems in Plant Pathology" The lecture was made more interesting by stereopticon views and the exhibition of rare specimens——The committee appointed for that purpose pre*sented, at the meeting of February 9, resolutions on the death* of Dr A Van Liew Brokaw——A section on ophthalmology has been formed and held its first meeting, and the formation of other sections is contemplated——The average attendance at the meetings the past year was 129——The program at *the meeting*, February 9, was a symposium on heart block Dr H D Senior showed a number of calves' and human hearts with the bundle of His dissected out

NEBRASKA

Society Meetings—The Dodge County Medical Society held its annual meeting in Fremont, January 14, and elected Dr John J Metzinger, Fremont, president, Dr Tandy Wiggles worth, Hooper vice president, Dr Andrew P Overgaard, Fremont secretary, Dr Edwin W Martin, Fremont, treasurer, *and Dr Hamilton N Morrow, Fremont, delegate to the state* medical association——The Elkhorn Medical Society met at Norfolk, January 16, and elected the following officers President Dr David W Beattie Neligh, vice presidents Drs Richard H Rhoden, Fremont and Homer L Kindred Meadow Grove secretary, Dr Wm R Peters, Stanton, and treasurer, Dr W H H Hagey Norfolk——The Colfax County Medical Society held its annual meeting at Leigh, January 16 and elected the following officers President, Dr Charles J Alger, Leigh, vice president, Dr Charles D Eby, Leigh, secretary treasurer, Dr Brice A Corbin, Schuyler, and censors Drs Silas G Allen Clarkson, and Peter Cavanagh Schuyler——At the annual meeting of the Adams County Medical Society Dr William H Lynn Hastings, was elected president, Dr Eugene C Foote, Pauline, vice president and Dr Fred L Taylor Hastings, secretary treasurer——The Richardson County Medical Society met in Humboldt, January 25, and elected Dr William F Shook, Shubert president, Dr Asa W Montgomery, Stella, vice president Dr Charles T Burchard Falls City, secretary treasurer Dr John A Waggener Dawson censor, and Dr Edward C Wittwer, Humboldt, delegate to the state association

NEW YORK.

Cocain Bill Passed—The General Assembly has passed the Whitney bill by the State Pharmacy Board, prohibiting the sale of cocain and eucain except on the prescription of a physician

Diphtheria in Ithaca—Since the outbreak of this disease in Ithaca there has been a total of 76 cases Many of the students in Cornell University have left for their homes because of the epidemic

To Lessen Number of Deaths from Gas.—Coroner Julius Harburg has had a bill introduced into the assembly prohibiting gas companies from using more than one stopcock on each gas pipe in use for consuming illuminating gas in buildings or rooms used for sleeping purposes

Personal.—Dr Roswell Park, Buffalo, has been appointed a member of the board of visitors of the United States Military Academy, West Point——Dr E. R. Davis, Portageville, was drugged and robbed in his office by two men February 6, who were later arrested and sentenced to imprisonment for 61 days in the Erie County penitentiary——Dr George I McKelway has resigned from the surgical staff of the Flushing Hospital ——Dr Simon F Cox, Albany, has been appointed superintendent of the State Hospital for Tuberculosis

Cost of State Charitable Institutions.—The report of the State Board of Charities for 1906 shows that $1,945,089 was appropriated by the state to charitable institutions It recommends that the legislature appropriate for the coming year $1,415,000 for maintenance and $467 920 for new buildings and improvements A plea is made for the establishment of a new custodial asylum for the care of demented epileptics and feeble minded persons who can not properly be cared for in existing institutions At present there are 450 idiots and helpless dements in the Craig Colony who are out of place in an open institution There are several hundred others scattered throughout the state who should receive custodial care and for whom there is no place in established institutions There were 7,753 inmates in the almshouses of the state at the close of the year and the number seems to be increasing The board recommends the building of a hospital pavilion for the Soldiers and Sailors' Home, as there are many cases of tuberculosis among the veterans requiring proper care The record shows that there were 30 618 dependent children remaining in institutions at the close of the fiscal year

Proposed State Medical Law—The Medical Society of the State of New York has sent a letter to the members of the profession telling of the efforts the three societies had made to reach a conclusion as to the framing of a law providing for a single examining board which should examine all applicants for medical license Questions relating to materia medica and therapeutics were to be excluded from the medical examination The representatives of the eclectic and homeopathic societies did not approve of this Senate bill No 164 and Assembly bill No 160 provide for a single examining board, absolutely abolishing as a matter of state recognition all distinctions between schools of medicine and meeting the disinterested view of the Educational Department of the State of New York The State Medical Society gives the bills its unqualified approval while the other schools have sent out letters of opposition in which the real issue is obscured As a result the Medical Society of the State of New York considers itself in duty bound to secure the passage of the bill for the following reasons

1 The medical men of the state who really believe in high educational standards should assist and not oppose the Educational Department in New York in its effort to legislate for the best interests of the people of the whole state

2 We are willing to let the citizens of the state choose the school or schools of medicine they prefer to patronize without legal in*terference and authority*

3 Medical laws are not designed to bolster up medical schools and medical sects but are designed simply to establish a scientific standard that the quack and charlatan can not reach

4 We believe the Board of Regents of the University of the State of New York who will appoint the medical examiners under the proposed bill are fair and impartial and will not use the power of appointment to discriminate for or against any medical school or sect

5 Unless a single board of medical examiners is established the state if consistent must in time grant a board to allopaths homeopaths hydropaths osteotherapists electropaths osteopaths midwives, opticians and every pseudo school whose adherents clamor for it loud enough Such a system would make ridiculous the whole theory of medical education Where is the state to draw the line?

6 The long-desired unity of the medical profession and the honest affiliation of all medical men of all schools on a common basis of scientific fellowship can not become a reality until the state abolishes the distinction between their sects and schools and sets a standard of merit in the e subjects only wher in medicine is an exact science Medical sects must not fear to stand the inexorable law of the survival of the fittest

New York City

Vacancy on Staff—There is a vacancy on the resident staff of Seton Hospital for Tuberculosis Spuyten Duyvil The position is a salaried one and applications should be made to Dr Theodore J Abbott, 123 East Seventy eighth Street, New York City

Harvey Lecture—The ninth lecture of the Harvey Society course by Dr William T Councilman professor of pathology in Harvard University at the New York Academy of Medicine February 23 is on the subject 'The [illegible] of Cert[illegible] cytes to Infectious Diseases'

Plans for Pathologic Building. [illegible] basement pathologic building w[illegible]

Bellevue Hospital have been filed The building is to have a frontage of 142 feet and a depth of 120 feet The building will cost $800,000, and is the second of the group for which plans have now been filed

Roosevelt Hospital Wins Suit.—Roosevelt Hospital has won its suit against the city whereby it claimed exemption from taxes on $150,000 worth of real estate not used for hospital purposes The writ was sustained on the ground that the conveyance of the property to the corporation of Roosevelt Hospital was induced by the promise of an exemption by the city from the taxes

Infant Death Rate Lowered.—The eighteenth annual report of the Babies' Hospital announces that the death rate among children under 1 year old in the city has fallen from 24 2 per 1,000 in 1888 to 17 per 1,000 in 1905, and among all children under 5 years of age from 101 to 55 per 1,000, these reductions representing an annual saving of 4,376 infants under 1 year and of 12,604 under 5 years of age

To Help Stamp Out Tuberculosis.—The committee on prevention of tuberculosis of the Charity Organization Society, composed of a number of noted physicians and citizens, has made an urgent appeal for more funds with which to carry on the crusade against tuberculosis The funds are entirely exhausted, and if the excellent educational work so well begun is to go on more money must be forthcoming

New Medical School—A postgraduate medical school has been opened in connection with the Williamsburg Hospital There are already several matriculants The school has established connections with a number of hospitals in Brooklyn The directors of the hospital have purchased several parcels of property adjacent to the present hospital buildings for a new institution and for homes for nurses and doctors

Contagious Diseases—There were reported to the sanitary bureau for the week ended February 9, 350 cases of tuberculosis, with 208 deaths, 314 cases of diphtheria, with 57 deaths 261 cases of scarlet fever, with 12 deaths, 195 cases of measles, with 5 deaths 65 cases of whooping cough, with 5 deaths, 61 cases of typhoid fever, with 7 deaths, 10 cases of cerebrospinal meningitis, with 16 deaths, 92 cases of varicella and 2 cases of smallpox, a total of 1,350 cases and 310 deaths

Public Lectures on Insanity—Dr Allan McLane Hamilton will deliver the fourth of the series of public lectures on the above topic, arranged for by the Psychiatrical Society of New York, at the Academy of Medicine, 17 West Forty third Street, Saturday, March 2 at 8 30 p m The subject will be "The Development of the Legal Regulations Concerning the Insane" These lectures are intended to place before the medical profession and the general public facts with regard to mental disorders, which indicate the possibility and duty of initiating a wide movement toward general preventive measures

More Work for Clean Milk.—Another meeting for the purpose of discussing the milk question has been held in Cooper Union, where three experts spoke in favor of Pasteurization It was shown that until the conditions under which milk was produced could be improved, Pasteurization was the only safe course. It has been announced that a permanent committee of citizens formed to devise ways and means of improving the quality of the milk supply of the city has planned for the establishment of more Pasteurizing plants with depots in different localities throughout the city It aims to secure a daily supply of from 20 000 to 30 000 quarts If the amount required can not be supplied at present it will be supplemented by inspected and certified milk Assurances of financial support to the extent of from $100,000 to $200 000 have been made It is hoped that after the city sees the good effects of this work it will come to the front and assume the burden It has been shown by the committee that among children supplied with Pasteurized milk the mortality has fallen from 19 to 3 per 1,000

NORTH CAROLINA.

Personal.—Dr J Howell Way is convalescent from his recent illness——Dr Julius A Caldwell, Salisbury, was painfully injured in a runaway accident near that town, January 16

Society Meeting—At the annual meeting of the Robeson County Medical Association held at Lumberton January 2 Dr Benjamin F McMillan, Red Springs was elected president, Dr James D Croom Maxton, vice president, and Dr Neil A Thompson, Lumberton, secretary treasurer

Hospitals Under State Commission.—A state commission to be composed of the governor attorney general and superintendents of the three state hospitals for the insane and four business men to be appointed by the governor, will have joint control of the insane hospitals of the state under the recently enacted Bickett bill They will also have authority to expend $000,000 in proper additions to existing institutions

New Hospital for Durham—Several years ago Mr George W Watts, Durham, presented the city with a hospital, which represented an outlay of nearly $100,000 He has recently announced his intention of erecting an entirely new Watts Hospital, at a cost of $500,000, which will, it is said, be the most complete in its appointment of any hospital between Baltimore and New Orleans Work was begun on the foundations January 1

OHIO

Hospital Report—At the annual meeting of the staff of Mt. Sinai Hospital, Cleveland, it was reported that during 1906 479 patients were admitted There were eight deaths on the medical side during the year and three deaths on the surgical side Two hundred and seventeen major operations were performed Anesthesia was given by the ether drop method 246 times without fatality Dr Frank E Bunts was re-elected president, Dr Carl A Hamann, vice president, and Dr Walter G Stern, secretary

Ill, Injured and Operated—Dr George W Sauer, formerly of Hanover, has been committed to the Masillon State Hospital from Stark County——Dr Ezla A. Dye, Vienna Cross roads, recently underwent operation for gallstones at the Springfield City Hospital——Dr Charles E Gaines, Covington, had a narrow escape from death by an overdose of strychnin——Dr Elmore Y King, Richwood, is reported to be critically ill——Dr Arthur H. Smith, Marietta, fell on an icy pavement January 29, fracturing his left arm above the elbow——Dr Grant S Staub, Dayton, has been seriously ill with septicemia——Dr Edward J Wilson, Columbus, was operated on for appendicitis February 1——Dr Frank L Stillman, Columbus, was severely injured in a collision February 7, between an automobile and street car——Dr John H. Landis, Cincinnati, is ill with typhoid fever

PENNSYLVANIA.

Hospital Report—The biennial report of the Hazelton Hospital for the term ended Sept 30, 1906, shows that 2,558 patients were treated in the institution These were all surgical cases, as no medical work is done at the institution

Personal—Dr William C Gayley has declined reappointment as a member of the Hazelton board of health——Dr Lewis H Taylor, Wilkes Barre, is spending a few weeks in Florida.——Dr Howard F Pyfer, Norristown, sailed for Europe December 1 on the *Caronia*—Dr Robert W Brady and family, Honesdale, have gone to Estero, Fla, to spend February and March.

First Aid to the Injured—The Lehigh Valley Coal Company is about to introduce a system of first aid to the injured at its mines A corps of men, about 20 in number, will be chosen at each colliery and will be taught by lectures and demonstrations the various methods of emergency treatment Special instruction will be given in the use of the litter, carrying helpless patients, lifting over obstructions, etc. There will be competitive drills and a trophy will be awarded the best team The work will be carried on under the direction of Dr Walter Lathrop Hazelton, and the litter drills, etc., under the direction of Mr Dimon of the Lehigh Valley Company, and a former member of the hospital corps of the Army The Philadelphia & Reading and Erie coal companies have already organized similar corps

Societies Elect Officers—The election of the Lancaster City and County Medical Society resulted as follows President, Dr George R Rohrer Lancaster, vice presidents, Drs C P Stahr Lancaster, and B F Good, secretary, Dr P P Brenenman, Lancaster, treasurer, Dr T B Appel Lancaster, censors, Drs G W Berntheizel Columbia, O Roland, Lancaster, J Mitchell Lancaster, trustees Drs A G Bowman, Lancaster, J H Musser Lancaster, and J J Newpher Mount Joy, reporter and librarian Dr P P Brenenman, Lancaster——The Monroe County Medical Society elected the following officers, President, Dr George H Rhoads, Tobyhanna, vice president, Dr C S Logan, Stroudsburg, secretary, Dr W E. Gregory, Stroudsburg treasurer Dr J A Hagerman, Sciota, reporter, Dr N C Miller, Stroudsburg

Elections.—The following officers of the West Philadelphia Medical Association have been elected to serve for the ensuing year President Dr James W McConnell, vice president Dr Sherman F Gilpin, recording secretary Dr George M Boyd, financial secretary, Dr Charles E Price, and treasurer Dr H Boydston Smith——The following have been elected officers of the Philadelphia Pediatric Society President, Dr David L.

Edsall, vice presidents, Drs Charles F Judson, Herbert B Carpenter, and J Claxton Gittings, recorder, Dr Charles H Weber, treasurer, Dr Howard C Carpenter, and secretary, Dr Maurice Ostheimer ——The following officers have been elected for the Northwestern Medical Association President, Dr Wilmer Krusen, vice president, Dr Clarence P Franklin, secretary, Dr Harry Hudson, treasurer, Dr J Thompson Schelt, and censors, Drs Nathan G Ward, Harry Lowenburg and Ray S Dorsett.

RHODE ISLAND

Found Not Guilty—Dr Cornelius J Hasbrouck, Bristol, charged with wilfully reporting a case of scarlet fever as German measles, was found not guilty January 23, the court holding that the prosecution had not made out its case beyond a reasonable doubt.

State Tuberculosis Sanatorium.—The board of trustees for the State Sanatorium for Consumptives has been organized as follows Chairman, Mr Roland G Hazard, Providence, and secretary, Dr William H Peters, Providence The other trustees are Messrs John C Pegram and Henry Nugent, Providence, and J Truman Burdick, Newport. Dr Harry L Barnes has been retained as superintendent at a salary of $3,000 annually, and Dr Charles B Garrett as assistant superintendent The institution has 105 patients at present and a waiting list Many improvements of buildings and grounds have been made during the year

TENNESSEE

Personal—Dr James A. Anderson, Memphis, has been selected to succeed himself as superintendent of the Shelby Poor and Insane Hospital

To Protect Physicians—A bill has been introduced into the House of Representatives of Tennessee to provide for the allowance as preferred claims in the settlement of insolvent estates, of the account of attending physicians for medical services rendered during the last sickness of the deceased

Suit Against Physician Dismissed.—The malpractice suit against Dr Thomas O Burger, McMinnsville, in which he was sued for $10 000 damages for alleged failure to treat a complicated fracture of the elbow joint properly, was dismissed by the jury of the Circuit Court of Warren County after ten minutes' deliberation

Election—At a recent meeting of the Knox County Medical Society the following officers were elected President, Dr Charles E Ristine, secretary, Dr John F Massey, treasurer Dr Ashley W Ogle, and custodian, Dr James F Scott all of Knoxville ——At a meeting of the Putnam County Medical Society, the following officers were elected President, Dr J F Dyer, vice president Dr John B S Martin, and secretary treasurer, Dr L D J Ensor, all of Cookeville.

TEXAS

Unclaimed Bodies for Dissection.—Senator Masterson has introduced a bill in the Senate providing for the dissection of unclaimed bodies by medical colleges A similar bill was introduced in the Senate two years ago, but was finally defeated

Communicable Diseases—Dr Thomas V Fryar, county health officer, reports two cases of smallpox in Corsicana —— Dr Cadar P Helms, New Boston, physician of Bowie County, reports a dozen cases of smallpox, all of the patients being negroes ——A number of cases of smallpox are reported among the negroes of Gainesville ——One case in a white family is reported from Lindsay ——Measles are epidemic at Monserate and Hallettsville ——Two cases of smallpox are reported east of Aubrey

Personal.—Dr V P Armstrong Dallas, has been appointed assistant state health officer ——Dr Sam Webb, Albany, has been appointed chief surgeon of the Central Texas Railroad Company, vice Dr W C. Jones, Walnut Springs, deceased —— Dr Lewis W Pollok Temple, while assisting in a surgical operation was suddenly attacked by appendicitis, which necessitated immediate operation ——Dr Wilham L. Barker, San Antonio, has been appointed superintendent of the Southwestern Insane Asylum and Dr Thomas T Jackson has been elected a member of the board ——Dr I Newton Suttle has been appointed local surgeon at Corsicana for the Cotton Belt System ——Dr William M Brumby, Houston, who has been appointed state health officer, assumed the duties of his new position January 20 ——Dr Holman Taylor, Marshall, has been appointed assistant state health officer ——The home of Dr Henry E. Lee, Beaumont, was damaged by fire to the extent of $1,500, January 2 No insurance was carried ——Dr Joel A Gibson has succeeded Dr Christopher C Nash, Beaumont as health officer of Jefferson County ——Dr William A Watkins Kemp, has been appointed a member of the board of trustees of the Northwestern Insane Asylum Dr Charles L Gregory, Gilmer, assumed charge of the institution as superintendent, February 4

Society Meetings—The Bosque County Medical Society held its annual meeting at Meridian and elected the following officers President, Dr Robert L. Kimmins, Iredell, vice president, Dr Joseph B Honeycutt, Womack, secretary treasurer Dr Joseph H Alexander, Meridian, and delegate to the state association, Dr Robert L. Kimmins The society adopted resolutions of respect regarding the late Dr William C Jones Walnut Springs ——The Central Texas Medical Association met at Waco, January 8 and 9 The following officers were elected President, Dr Joseph E Dildy, Lampasas, secretary treasurer, Dr Milton P McElhannon Belton, chairman and secretary of section on practice of medicine, Dr John W Torbett, Marlin, and Dr Thomas D Frizzell, Powell, chairman and secretary of the section on surgery, Dr Kenneth H Aynesworth, Waco, and Dr Allen J Gilbert, Hillsboro, chairman and secretary of the section on eye, ear, nose and throat Dr James M Woodson, Temple, and Dr Roy H Gough, Hillsboro, and chairman and secretary of the section on gynecology and obstetrics, Dr W L. Crosthwaite, Holland, and Dr Richard McCormick, South Bosque The president, secretary and Dr Ira C Chase, Fort Worth, secretary of the State Medical Association, were named as members of the legislative committee The society adjourned to meet in July at Temple ——The Fayette County Medical Society met in La Grange, January 15 and elected the following officers Dr Robert A McKinney, La Grange, president, Dr Otto Ehlinger, La Grange, vice president Dr Robert H Seymour, Warrenton, secretary, Dr Thomas W Moore, La Grange, treasurer, and Dr George W Allen, Flatonia censor

VERMONT

College Term Opened—At the meeting of the fifty fourth annual session of the Medical Department of the University of Vermont, Burlington, President M H Buckham presided and addresses were made by Dr Henry C Tinkham, dean of the faculty, and Dr Fred A Lockhart, Montreal, Que

Personal.—Dr F Thomas Kidder, Woodstock, has been appointed to represent the state in the National Legislative Council of the American Medical Association ——Dr L P Sprague, Burlington, has been appointed food inspector and state analyst to work at the State Laboratory of Hygiene in conjunction with the State Board of Health and the National Pure Food Association ——Dr George X. Roberts Rutland, suffered severe loss by fire in his house February 4

State Boards Organize.—At the annual meeting of the State Board of Health at Burlington, Dr Charles S Caverly Rutland, was elected president, Dr Henry D Holton, Brattleboro secretary and Dr F Thomas Kidder, Woodstock treasurer ——At the annual meeting of the State Board of Medical Examiners held at Montpelier, January 8, the following officers were elected President Dr Frank H Godfrey, Chelsea secretary Dr W Scott Nay Underhill (re elected), and treasurer Dr Elroy B Whitaker Barre

WASHINGTON

The Fight Against Tuberculosis—An association for the prevention of tuberculosis has been organized in Seattle and is now raising funds for the erection of a sanatorium A site has been selected on the shores of Lake Washington and offers of liberal assistance are in the hands of the committee having charge of the work

Personal—Dr F M Rininger Seattle has returned from the East ——Dr Fonda Nadeau Seattle has sailed for Europe ——Dr William C Booth Seattle has recently returned from Europe ——Dr Cornelius J Lynch North Yakima, will soon leave for the East and Europe ——Dr Frank H Luce Davenport has been attending the session of the legislature at Olympia ——At a meeting of the State Board of Health at Olympia, January 21 Dr John M Semple Spokane was elected president, and Dr Elmer J Hog Seattle secretary —— Dr James T McKone Tacoma is visiting in Andover, Mass ——Dr Caleb F Martin Bellingham has been reappointed physician of Whatcom County ——Dr Ivar Jansen Seattle has been reappointed president of the local board of health —— Dr Joseph F Stauffer Everett has been reappointed health officer and physician of Snohomish County

WISCONSIN

Consolidation of Colleges.—Owing to the [illegible] of the [illegible]waukee Medical College with the Ma[illegible]versity [illegible] faculty of the former institution has [illegible] the [illegible]

sary legal formalities have been completed it is understood that the faculty will be reappointed

State Medical School.—The legislature has been asked for a two sevenths mill tax for the support and development of existing colleges and departments The University of Wisconsin asks permission to establish a college of medicine and requests an annual appropriation of $50,000 for such a college equipped to do the first two years of medical work

Personal.—Dr Gustavus I Hogue, Milwaukee, has sailed for Europe by way of the Mediterranean ——Dr Hugo Philler, Waukesha, on the occasion of his sixty ninth birthday, was the guest of honor at a dinner given by Dr Byron M Caples ——Dr and Mrs William H. McDonald, Lake Geneva, sailed for Europe February 3 ——Dr Stephen E Gavin, Fond du Lac, sailed for the Mediterranean, February 7 ——Dr Alexander C Fraser Manitowoc, sailed for Europe February 7 ——Dr James G Schall, Oshkosh, was recently operated on for appendicitis ——Dr Quincy O Sutherland, Janesville, has been reappointed a member of the State Board of Health

Communicable Diseases—Sheboygan reports 10 cases of typhoid ——The public school at Geneva has been closed on account of scarlet fever ——On account of an outbreak of scarlet fever at Medford the public schools have been closed ——On account of scarlet fever in the vicinity the school house in district No 5, Little Suamico, has been closed ——An epidemic of smallpox is reported from Bloom township, on account of which schools have been closed ——An epidemic of smallpox is reported from Maple Creek ——The public schools of Cooksville have been closed on account of the prevalence of diphtheria ——Smallpox is reported among the Indians of the Lac Court d'Oreilles reservation and the post and village have been quarantined

WEST VIRGINIA

Hospital to be Built—Dr Henry C Jones, Bluefield, has purchased 20 acres in the town of Logan, as a site for a hospital and sanatorium

Personal.—Dr William A Craeraft Elm Grove, is taking a trip to the West Indies ——Dr Charles H. McLane Morgantown has been appointed health officer of Monongalia County ——Dr Cyrus F Boyer, Sr, Fairmont, who has been seriously ill, is reported to be convalescent

GENERAL

Merger of Publications—The *Archives of Physiological Therapy* will hereafter be published as a part of the *Journal of Inebriety* This latter, in addition to the various phases of its own field will present the therapeutic effects of hot air radiant light baths electricity, massage psychotherapy and other physiologic means

FOREIGN

Official Investigation of Lead Poisoning in Austria—The members of the Austrian cabinet recently held a conference with 39 experts and representatives of the various trades in which lead is used to study the subject of lead poisoning in its various aspects The organization of the investigation is in the hands of Dr Mataja chief of the bureau of labor statistics who sent out to the various trades a question blank to collect data for a crusade against lead poisoning

Prizes for Research on Alcohol—The Total Abstinence Association of German speaking Physicians has offered a prize for the best work on the two following subjects "Influence of Alcohol on the Length of Life and Metabolism of Starving Animals," and "Means to Deprive Alcohol of Its Toxicity in the Organism During Starvation and also Under Feeding with Sugar" Articles competing for the prizes should be received by Dr Holitscher, Pirkenhammer bei Karlsbad, before April, 1908

Prizes for Essays on Prophylaxis of Lead Poisoning—The International Association for Protection of Workmen Against Occupation Affections offered in 1905 a series of prizes for the best essays on five various aspects of lead poisoning, as mentioned in these columns at the time Sixty three articles were received in competition, and 7 of the articles were awarded prizes, 10 were recommended as worthy of purchase and 19 were highly commended Sommerfeld of Berlin received two of the prizes, while his articles on other aspects of the question received honorable mention or were recommended for purchase

Thirty-sixth German Surgical Congress.—The next annual congress of the German "Gesellschaft für Chirurgie" will convene at Berlin April 3 to 6, 1907, with an annex exhibition of instruments etc Professor Riedel of Jena will preside but all business matters are in charge of Dr Melzer at the Langenbeckhaus, Ziegelstrasse 10/11, Berlin N, where the sessions will be held The main addresses will be on "Surgery of the Heart," by Rehn of Frankfurt, who appeals to all members of the profession at home and abroad to aid him in preparation of his address, especially with data in regard to the remote results and present condition of patients after operative treatment of heart injuries, "Operative Treatment of Pulmonary Affections," by Friedrich, "Extirpation of the Prostate," by Kümmel, and "Fractures of the Femur, Especially in the Upper and Lower Thirds," by Bardenheuer and König The program is to be limited to 70 communications and demonstrations, the former restricted to 15 and the latter to five minutes, with the speakers in the discussions limited to five minutes each The former custom of a general reception of the members the evening before, the Begrüssungs Abend has been omitted this year on account of the progressive lack of attendance

Provision for Cancer Research at Aberdeen—It is announced that the Hon A McRobert, Cawnpore, India, has founded a fellowship at Aberdeen University for cancer research At Mr McRobert's death the sum of $50,000 is to be available for this work, but that it may begin at once he has undertaken to provide $2,000 a year The endowment is to be called the "Georgiana McRobert Fellowship," and is founded as a memorial to Mrs McRobert In the event of any epoch making discovery in connection with cancer research, the medical faculty of the university is to have authority to allot all or any portion of the capital as a reward to the discoverer, and also to the investigator or investigators whose work had, in the unanimous opinion of the medical faculty, contributed to the discovery If for any reason the fund or the income thereof shall cease to be useful (or become unnecessary) for the original purpose, the medical faculty is to have the power to use them for the furthering of inquiry in like manner into the causes, prevention and treatment of any other so called incurable disease afflicting the human race Mr McRobert expressed the opinion that the appointment should be from year to year, but that a retiring fellow should be eligible for re election

Second International Congress for Protection of Child-Life—This congress is to be held at Brussels, Belgium, September 12 17, 1907, to discuss ways and means for prevention of infantile mortality THE JOURNAL has frequently mentioned the French institutions called "gouttes de lait" (drops of milk), founded to give advice to mothers, to encourage breast feeding and to distribute milk if needed for infants Similar institutions have been founded in Germany where they are known as "Säuglingsfürsorgestellen," and one has been in successful operation at Philadelphia for a long time, with others at other points in this country The first international congress was called the "Goutte de lait" Congress and was held at Paris in 1905 The scope of the congress has now been enlarged to include all questions relating to the welfare of infants Dr G W Goler, 127 East Avenue Rochester, N Y, is the chairman of the national committee for this country Inquiries concerning the congress can be addressed to Dr E Lust, rue de la Limite 27, Brussels Belgium The International Union of all institutions for protection of child life is a permanent association that has its seat at Brussels and superintends the organization of the congresses and perpetuates their work An exhibition of infant hygiene will be held in connection with the congress

Damages for Infection of Wet Nurse by Syphilitic Infant.—The *Ann de Derm* for January contains the text of the decisions in two recent suits in France for damages brought by wet nurses infected by syphilitic infants In the first the infant was the child of a medical student, externe at one of the hospitals who failed to warn the wet nurse of possible contagion, and he was sentenced to pay damages of $1,200 and costs In the second case the wet nurse claimed damages from the mother of the child, from the director of the employment bureau that engaged her, from the physician connected with the employment bureau who gave her a certificate stating that the infant was free from any contagious disease, from the physician sent to attend the infant by its mother and lastly, from the medical inspector sent by the police authorities, who failed to remove the child until after the nurse had been infected None of them had informed the nurse of the condition of the infant The mother of the child and her physician were condemned to pay conjointly the sum of $1 600 to the plaintiff with costs, but the others were acquitted, as signs of syphilis were not apparent at the early date when the infant was seen by the director of the employment bureau and his physician The medical inspector was also exonerated, as no signs of the disease were apparent at his first visit, and as the nurse was already infected at the time on his second call, according to the regular order of visits

LONDON LETTER

(From Our Regular Correspondent)

LONDON, Feb 9, 1907

The Opsonic Treatment

The opsonic method, discovered in 1903 by Sir Almroth E Wright in conjunction with Dr Douglas, in spite of opposition and skepticism, is making considerable progress The principal work is being done at St Mary's Hospital under Sir Almroth Wright and at the London Hospital under Dr Bulloch Most of the other hospitals have also taken it up The time and attention required by the method is so considerable that it is impossible for the ordinary bacteriologist of the hospital to perform the work, hence it is becoming customary for a hospital to have its official "opsonist," and for a physician in general practice to call an "opsonist" in consultation in the various diseases in which the method has been successfully used The list of diseases now treated by the method is a long one, it includes cases of staphylococcic infection, such as furunculosis, acne and sycosis, pneumococcic infections, such as empyema, cystitis and suppuration of the antrum, diseases due to the *Bacillus coli communis*, such as cystitis and various local infections, gonococcic infections, such as gonorrhea and gonorrheal rheumatism, tuberculous infections such as lupus, ulcerations of the skin and subcutaneous tissue, arthritis, cystitis, epididymitis, peritonitis, adenitis, laryngitis, iritis and phthisis, Malta fever and typhoid fever In an address recently delivered at the Royal Institution, Sir Almroth E Wright delivered a remarkable forecast of the medicine of the future Up to the present, he said, the community has devoted most of its energy to trying to kill bacteria outside the organism by hygiene and disinfection, but disease germs still lie in wait in countless millions in our food and in the air we breathe, like the poor, they will always be with us The next advance of civilization will be to fight the disease within the organism The doctor of the future must be an "immunisator"

The Outbreak of Cerebrospinal Fever in Belfast

Notwithstanding the most vigorous precautions, the outbreak of cerebrospinal fever in Belfast continues to increase Since its beginning in December, up to February 5, there have been 53 cases, with 25 deaths Dr Kolle of Geneva, who has produced a serum for the treatment of the disease, has sent a large quantity to Belfast. It is thought that the disease was introduced from Glasgow, where it has existed for some time The type is very virulent, even in the most rapidly fatal cases purulent inflammation of the membranes of the brain and cord has been found. How the disease spreads is a mystery It appears erratically in different quarters of the city, not like either an air borne or a contact disease At none of the hospitals has a student or a nurse contracted the disease A medical student has died from it, but he had never seen a case In Dublin though the disease has not yet appeared, the corporation has decided to make it notifiable for a period of six months

Cerebrospinal Fever in Scotland.

During January 52 deaths from cerebrospinal fever occurred in Glasgow, and 105 cases have been reported to the health officers Since May 21, when the disease was first made notifiable, until the end of December, 205 cases have been reported The disease also exists in other towns in the west of Scotland In Edinburgh, also, the disease is becoming prevalent 9 deaths occurred in the first five weeks of 1907

Malaria in West Africa

Commenting on the large amount of malaria which still exists in West Africa Professor Donald Ross points out that many of the cases are due to neglect of precautions against the disease by the Europeans Many other cases are due the fact that sufficiently energetic precautions against malaria are not carried out However a considerable improvement has already taken place In the report of the army medical department for 1906 it is stated that the admissions for malarial fever had fallen in West Africa to 588 per 1 000, from an average of 1,389 in the preceding eight years The senior medical officer reports that "the improvement is due to the antimalarial measures adopted during the last three years

The Health of the Navy

The recently issued report of the admiralty shows that the health of the navy was much better in 1905 than in the preceding years There were 111,020 men in the force and the total number of cases of disease and injury was 81,568—734 per 1 000, which is a decrease of 119 per 1 000 as compared with the average of the previous eight years Staff Surgeon A Gaskell makes some notable criticisms on some of the physical culture systems now in vogue He deprecates the current popular admiration for the "strong" man with huge muscles and a biceps measurement of fifteen inches He points out that there are two kinds of strength—physical and constitutional The former is the strength of large muscles and is acquired by the use of dumbbells and such exercises, often at the expense of the constitution Constitutional strength is practically synonymous with health and depends on the perfect working and development of all parts, especially the heart, and least of all the muscles The uses of great physical strength are few A man who has a heart strained by the improper use of dumbbells is of little use as regards endurance, however large his muscles Even if his heart is not damaged his training in co ordination may have been neglected so as to render his large muscles useless From an experience of thousands of men the staff surgeon finds that the physically strong man stands the inroads of disease badly The straining of the heart and circulatory system leads to valvular incompetence, atheroma, and aneurism Straining of the lungs leads to emphysema and fibrosis

VIENNA LETTER.

(From Our Regular Correspondent)

VIENNA, Jan 25, 1907

Physicians' Fees to be Increased

The increase in price in all articles of daily life has exerted its influence especially on the profession, who by long custom, are expected to "keep up appearances," and to live in a way which severely taxes the income of a physician Therefore, in a mass meeting held recently, a resolution was adopted in which the necessity of raising the charges for professional aid was upheld and all members of the Vienna medical faculty, together with the professors and consulting physicians, were requested to inform their patients of the new plan Furthermore, it was decided to announce the fact to the general public by means of the daily press and private notices At the same time the Vienna Medical Council took the matter in hand and published a new tariff which is intended to serve as a basis for the calculation of medical fees The tariff of the Aerztekammer is meant to be a minimum tariff, below which no practitioner is expected to charge (in Vienna) The lowest fee for an office consultation is fixed at forty cents in poor districts and sixty cents for the better class of patients At least double this is to be charged for a house visit Night visits are to be charged as two day visits Heretofore the general practitioner has rarely received more than forty cents for a consultation or sixty cents for a visit, while specialists rarely get more than $1 25 for a consultation during office hours The fees for a professor vary from $2 to $6 while as much as $20 has been paid for consultations in the houses of patients of the middle classes It is anticipated that the increase of the fees will at first seem to diminish the income of the practitioner, because he will be less often called for but in time matters will become undoubtedly better, and that is the object of the new regulations

Pay Wards in the Vienna Hospitals

The government, as possessor of the public hospitals, is trying a new scheme in order to do away with the chronic deficit of charitable institutions but it is much to be regretted that the increase of the income is to come out of the pockets of the practitioners The plan is as follows A number of beds are to be set aside in each ward for the use of patients of the middle class who can afford to pay at least $1 25 a day, and small rooms with one bed only will be provided for those who are willing to pay $2 a day for that accommodation The drawback at least as far as the profession is concerned is the stipulation that only the members of the hospital staff shall treat the patients in these wards, and the family physician will not be allowed to continue his professional attendance on the patient who has entered the pay ward This restriction meets naturally the severest opposition in medical circles but several more or less vigorous protests from medical bodies and even from the staff of hospital consulting physicians have as yet been ineffectual

Precautions Against Claims for Unnecessary Operations

The hospital directors have resolved to make each patient who consents to undergo an operation, sign an agreement to permit the surgeon to remove any organ or part of it or to sacrifice any part of the body during the operation if he deems it absolutely necessary to do so In the case of patients who on account of age or mental condition are not capable of understanding what the written agreement means the nearest relatives have to give consent This proceeding has become necessary because of two recent claims for damages authorized removal of parts

Pharmacology

Simply a Matter of Common Honesty

Under this title the *Pharmaceutical Era* (Jan 17, 1907), comments on the answers of the officials of the Department of Agriculture to inquiries regarding the meaning of the Food and Drugs Act The following phrases are frequently met "Misrepresentations of all kinds are forbidden If the firm is purely fictitious, the use of the name would undoubtedly be a misrepresentation Many firms of standing have in the past handled goods of the best grade under their rightful name, but have created fictitious hypothetical and imaginary names purely for the purpose of dealing in inferior, adulterated and even spurious articles to which they are ashamed to have their honorable legal name attached In other cases such names are assumed solely for the purpose of evading responsi bility"

The interpretation of the new law is such as to require straightforward simple honesty and such interpretation should be made to cover all forms of misrepresentation That this is the purpose of the officials is indicated by the replies of Dr Lyman F Kebler to queries involving the right to use names equivalent to those specified in the law In answer to query 29 he states "The law uses the word opium for the 'concen trated extract of *Papaver somniferum*' and the term 'opium' is the only one that can be used in declaring the presence of this drug on the label"

Q 30 —Would it be satisfactory to use "Phenylacetamide' or the U S P phrase The monacetyl derivative of aniline or the follow ing formula, $C_6H_5NH(CH_3CO)$ for acetanilide as indicated in regu lation 17 (f)?

"A —No The law employs the word Acetanilide only for the chemical in question, and this is the only name that can be used on the label of any preparation indicating the presence of this ingredient The word Phenylacetamide is the chemical name for two distinct chemicals and its use, therefore, would be misleading The use of chemical formulas to designate the presence of chemicals can not be allowed"

Q 31 —The active constituent of one of our products is tri chlorethidene ethyl ether Will it be satisfactory to use this name on the label giving the amount of the above chemical present in our product?

"A —No In enumerating the ingredients, the quantity or proportions of which must appear on the label of any prepara tions in which such ingredients may be present, the act uses only common names Structural formula chemical names are not employed for any of the chemicals enumerated and their use for chemicals, in place of the common names is neither expressed nor implied The name used in the law for chloral hydrate is chloral hydrate and not trichlorethidene glycol The common name for trichlorethidene ethyl ether is chloral alco holate, and this is the only name that can be used for the chemical in question, in connection with the Food and Drugs Act"

This is not only good law, but a clear statement of the principles of common honesty The employment of unusual chemical terms for a public not familiar with such terms evi dences a desire to conceal and to deceive It must be admitted that physicians as a rule are not familiar with the complex terms of modern chemistry The use by manufacturers of a term which can be understood only by a chemist when a simpler term would equally well designate the product is evi dence of a desire to conceal the true composition and does not reach the ideal of common honesty set up by the law

Examination of Proprietaries in Germany

The *Apotheker Zeitung*, Dec 19, 1906, page 1071, gives the results of an investigation of sajodin by F Zernik. This is one of many similar reports of investigation carried out in the Pharmaceutical Institute of the University of Berlin, at the request of the German Apothecaries Society From this it will be seen that this society is doing work very similar to that of the Council on Pharmacy and Chemistry of the Amer ican Medical Association The investigations of the insti tute are further utilized to determine the characters of new remedies as a preliminary to their eventual introduction into the German Pharmacopeia According to the report, sajodin is a calcium salt of mono iodo behenic acid intended as a sub stitute for the metallic iodids to replace iodized sesame oil or iodipin, which has the objection of oily consistence and some what unpleasant taste The product is put out by the well known Farbenfabriken vorm Friedr Bayer & Co, of Elber feld, and also by the Farbwerk vorm Meister, Lucius & Brüen ing, Hoechst, a M. As a definite chemical compound its com position should be unvarying The investigations of Zernik showed, however, a considerable variation in the amount of iodin which in some samples was much too low, while the calcium was too high The amount of moisture also varied On communicating these results to the manufacturers they acknowledged the defect and promised that henceforth a preparation with a guaranteed minimum of iodin should be put on the market This variation in the product of a reliable firm shows the need of inspection and control of synthetic products even when made under most favorable condition and by firms whose name is usually taken as a guarantee of relia bility

Sale of Cocain Nostrums Prohibited in Massachusetts

According to the *American Druggist*, Oct 29, 1906, the State Board of Health of Massachusetts has authority, by public notice in such trade journals or newspapers as the board may select, to forbid as unlawful the traffic in, or gift of, advertised remedies containing cocain or any of its salts, or alpha cocain or beta eucain or any synthetic substitute of the aforesaid In pursuance of this authority, the board has given notice that the sale of Crown Catarrh Powder (Crown Pharmacal Company, New York), Dr Agnew's Ca tarrhal Powder (Anglo American Medicine Company, Chicago, Toronto and London), and Instant Cold Relief and Instant Catarrh Relief (I C R. Medicine Company, 168 Massachusetts Avenue, Boston) is contrary to the provisions of Chapter 386 of the Acts of 1906 Fines have been imposed under the law, although the defendants pleaded ignorance of the advertising of this remedy The board has also forbidden the sale of Pretzinger's Catarrh Balm (R. Pretzinger & Bro, Dayton, Ohio), and Dr Cole's Catarrh Cure (The Cole Medicine Com pany, London, New York, Chicago)

Importation of Nostrums Into Italy

The Italian minister of the interior has issued a circular giving the conditions under which proprietary medi cines may be imported. The importation of these remedies, says the *Pharmazeutische Post*, is forbidden without special authorization by the Superior Sanitary Council The appli cation for such a permit must give the qualitative formula of the preparation with the place and method of manufacture (at least in outline) and the formula of constitution and doses must be placed on the package and in the directions intended for the public. The therapeutic uses must be speci fied and it is forbidden to attribute to any preparation therapeutic virtues other than those which really are possessed by its components The product intended for im portation must have conformed with all the regulations of the country from which the importation is made and the importer is required to produce documentary evidence of this fact

Incompatibility of Sodium Chlorid and Calomel.

The incompatibility of common salt and calomel is the sub ject of an investigation by Carracido (*Rev de Med y Cir Pract*, Aug 14, 1906, abs in *Münch med Wochschr*, Oct 30, 1906) Corrosive sublimate is formed by the reaction between these substances, but in such small amounts that no bad re sults are to be feared from it In the opinion of Carracido such a formation of mercuric chlorid is essential for the devel opment of the activity of calomel Puerta states that the amount of corrosive sublimate formed is greater in proportion to the amount of sodium chlorid that is mixed with the calo mel and to the height of the temperature

Nostrum Advertising in Religious Papers

Dr G D Thomas of Chicora, Pa, writes

"Regarding the discussion of the impropriety of the religious papers accepting "patent medicine" advertisements, permit me

to say that the Pittsburg (Pa.) *Christian Advocate* formerly contained such advertisements. Some five or six years ago I corresponded with the editor regarding the matter and he expressed his dissatisfaction with the situation and referred me to the business manager. I do not recall how often I wrote the latter, but I am sure I called his attention to the fraudulent claims of some of the advertisements in the paper. For over a year now they have been discontinued. I do not know that my writing hastened matters, but I believe it contributed in a measure to the change. If all physicians who are readers of these religious papers would take pains to protest repeatedly, all such periodicals would in time be cleaner in their advertising columns."

[In his letter our correspondent has gone straight to the mark. Papers and magazines, whether religious, medical or secular, are like public officials, exactly what the public makes them. Reforms must come from the readers. They must not be expected to come from the business management. If the readers and subscribers of religious papers want religious journals which are free from deceptive and dishonest advertising, they can easily get them, if they will make the management of such papers understand their wishes.]

Methods of Nostrum Vendors

The methods of the nostrum vendors have a remarkable similarity in foreign countries as well as here. Neustätter (*Münch. med. Wochschr.* Sept. 25, 1906), calls attention to the efforts to mislead medical men made by the promoters of antipositin, the notorious nostrum which has been put forward with such extravagant claims as a means of reducing corpulence. He quotes a circular which refers to the important articles that have appeared in the medical press regarding the remedy. The shamelessness of this proceeding, says Neustätter, is shown by the fact that the articles which have appeared have warned against the use of the nostrum. According to the analysis of F. Zernik (*Apothek. Zeitung*, No. 81, 1906), this remedy consists of sodium citrate, 28.5 parts, sodium tartrate, 20, sodium bicarbonate, 18, sodium chlorid, 12, purified tartar, 9, tartaric acid, 6, dried carbonate of sodium, 6, and magnesia usta, 0.5. It would seem that the composition of the mixture has been changed since its first introduction.

Correspondence

The New Infectious Disease

NEW YORK CITY, FEB. 2, 1907

To the Editor:—Dr. Hirshberg, I fear, is not modest in claiming the credit of having discovered a new infectious disease (THE JOURNAL, Feb. 2, 1907, p. 416), and branding the work of those who long before him wrote on this subject as "so very obscure, faulty and incomplete." The paper of mine which Dr. Hirshberg quoted (*Amer. Medico-Surg. Bull.*, Dec. 26, 1896), speaks of an epidemic of a "Peculiar Form of Hyperpyrexia" which I observed in 28 children under 14 years of age. The fever developed very suddenly, ranged between 104 and 106 F., continued almost uninterruptedly for from two to three and a half weeks, and ended either by crisis or lysis, leaving the children in apparently perfect health. The rapidity of the pulse and respiration varied with the height of the temperature. There were no roseola, enlargement of liver or spleen, diarrhea, delirium, insomnia, or headache. Some patients presented mental dulness and disturbance of hearing and speech. I strongly emphasized the fact (giving full details) that very careful bacteriologic and microscopic examinations of the stools, urine and blood proved the absence of malaria, typhoid or influenza. I also mentioned that post-mortem examination of a tuberculous child who succumbed to this fever failed to show any lesions suggestive of malaria or typhoid. Finally I made an effort to differentiate this affection from several other similar fevers.

H. B. SHEFFIELD, M.D.

The preceding letter was submitted to Dr. Hirshberg who makes the following reply:

BALTIMORE, FEB. 6, 1907

To the Editor:—Dr. Sheffield takes a very unkind attitude toward the simple announcement of an undifferentiated infectious disease. Far be it from me to claim anything that justly belongs to another.

So far as I can find, there has been no claim made by me of "discovery." Nor do I wish any honor or credit for publishing observations, strictly objective. If the cases described in the several papers by me are the same as Dr. Sheffield's, there will be honor enough for me in having called the attention of the medical world to his paper of eleven years ago. But as his own letter points out a few of the many differences between his cases and mine, I shall briefly repeat them:

Sheffield's Cases	*Hirshberg's Cases*
Epidemic.	Sporadic.
Children under 14.	Young adults over 18.
Rapid pulse.	Slow pulse.
Rapid respiration.	Not accelerated.
Termination crisis and lysis.	Gradual (lysis).

When I mentioned lack of data, I referred only to additional methods of examination which have crept into our technic in the intervening eleven years.

LEONARD KEENE HIRSHBERG.

Esperanto—The International Language.

SACRAMENTO, CAL., Feb. 11, 1907

To the Editor:—Kindly permit me to suggest and to urge the early establishment in THE JOURNAL of a department of Esperanto on the following grounds:

1. Esperanto is the one and only proposed international language which has successfully borne the scrutiny both of scholars and of men of affairs.

2. The adoption of Esperanto as the international language would be the most powerful promoter of universal peace imaginable—infinitely more effective than Dreadnaughts or any other kind of "big stick" and immeasurably less expensive. In blood and treasure what does armed peace cost the world?

3. The adoption of Esperanto as the international language would be the most powerful promoter of the diffusion of knowledge of which it is possible to conceive. Free trade in knowledge! The freedom of the vast realm of science and art and literature for a few days' study! That imagination must be dull, indeed, which does not kindle at the thought!

4. A reading knowledge of medical Esperanto could be acquired in a few days by a physician of fair intelligence.

5. THE JOURNAL as the official mouthpiece of the largest organized body of men in the world whose first duty it is to prevent death (and why not death by war as well as death by disease) and whose chief means of preventing death is the diffusion of knowledge should be among the foremost in the great work so happily begun by Dr. Zamenhof.

W. A. BRIGGS.

[We willingly give space to the above letter because we would like to see a universal language, but we fear that the majority of our readers will think that the propaganda of this idea is not the function of a medical journal.—ED.]

A Summary of the Therapeutic Field

NEW YORK, Feb. 5, 1907

To the Editor:—Dr. J. W. Robinson, McCammon, Idaho, has kindly called my attention to two inaccuracies in my address published in THE JOURNAL, Sept. 1, 1906. (1) Nitrous acid should read nitrous oxid. (2) The sentence stating that chemically scopolamin is the same as *atropin* etc., should read it is the same as *hyoscin* etc. Other matter explanatory of difference in action of those alkaloids was unintentionally omitted from the typewritten copy, and as I was in Europe when the proof was forwarded I could not correct it.

THOMAS L. PRINCE.

Not Responsible for Discussion as Published

CHICAGO, Feb. 18, 1907

To the Editor:—My discussion of Dr. Ohlmacher's paper which was published in the last number of THE JOURNAL was published against my desire and without my knowledge. The report of the discussion was not [illegible] myself.

[illegible]

Miscellany

Supervision of Midwives

In February, 1906, an investigation of midwifery practices both abroad and in this country was undertaken in New York City by a body of representative men and women The results of this investigation are given by Miss F E Crowell, assistant secretary of the New York state branch of the Public Health Defense League, in *Charities and the Commons*, Jan. 12, 1907 Miss Crowell begins her article by a brief review of the history of midwifery, which she states is as old as the human race. During thousands of years the care of parturient women was practically in the hands of midwives If an unusual or dangerous complication arose a physician was called to assist in the delivery, but the process of labor was considered a natural, normal occurrence, requiring no interference or aid except that to be obtained from women experienced in this work Gradually as medical science developed and the art of obstetrics was taken up by physicians, the midwife, while she did not actually retrogress, at least stood still Universities were closed to her and opportunities for improvement were denied, with the inevitable result that midwifery ceased to be regarded as a profession and there was a lowering of the standards which had hitherto prevailed among women who had devoted themselves to this calling The introduction of the forceps gave physicians an advantage, and in the seventeenth century, in France, it became fashionable to employ a physician instead of a midwife The women of the masses, however, have continued to demand aid from their sister women, and economic conditions have kept alive the calling of the midwife till to day

Early in the nineteenth century Europe seems to have accepted the fact that midwives constituted an inherent part of the social order—a force to be guided and controlled, rather than ignored and opposed As a result, many European countries provided for the examination and licensing of these women, England alone refused to enact legislation affecting midwives till 1902 To day the training and duties of midwives are practically the same in all European countries They are admitted to lying in asylums for poor women and are taught cleanliness and the physiology of labor theoretically as well as practically The European midwife is under supervision during her entire lifetime Her equipment is inspected, she is prosecuted in case of neglect, and for neglect her license may be revoked

In this country little supervision is exercised over these women, in some states they are compelled to take an examination In New York, Miss Crowell states that the majority of midwives are ignorant, untrained women who find in the natural needs and prejudices of the parturient women of their race a lucrative means of livelihood In the investigation 500 women were visited, and of this number 51 were unable to read or write, while 30 per cent were unable to speak English Two hundred and one held foreign diplomas This means that 40 per cent of the number had been properly trained and had given evidence of certain required standards of proficiency Forty three per cent held diplomas from so called schools of midwifery in this country, or certificates from physicians, who, says Miss Crowell, for reasons best known to themselves, have in many instances seen fit to certify to the proficiency of ignorant, incompetent women Of the 500 women visited Miss Crowell states that less than 10 per cent could be considered capable, reliable women In some cases Miss Crowell found that the diplomas from American schools had been given to women who could neither read nor write, but who had the price—$66 There are four such schools in New York City, she states Midwives holding these diplomas told Miss Crowell of being sent to their first case alone, of having to conduct the entire labor as best they could, and of their fear that they might, on their return, find the patient dead The bags and equipment of the majority of these women, Miss Crowell says, would make fit decorations for a chamber of horrors Rusty scissors, dirty string, a bit of cotton, a few corrosive tablets, old rags and papers, some ergot and vaselin, and a gum catheter, wired, were the usual contents Many of the women had complete portable sterilizers which they had been compelled by law to use in Europe, and when asked why they did not use them here, replied "It is not necessary, nobody cares what we use, the bag is handier, and everyone uses it here" Some women who had no bags carried string in their pockets and scissors attached to their belts, or would depend on whatever they chanced to find at the patient's home. Of the entire 500 visited, Miss Crowell states that less than 10 per cent could be qualified as competent midwives A few women were found who washed the child's eyes with boracic acid, and a still more limited number who used the silver nitrate prescribed by the board of health

Miss Crowell also calls attention to the evils of allowing a midwife to sign a death certificate in the case of a stillborn child It is impossible to estimate, she says, how many of these cases are actually stillbirths and how many the result of criminal interference with pregnancy Nearly all the midwives visited carried wired catheters, showing that they were in the habit of interrupting pregnancy, while some carried uterine curettes, dilators, pessaries, etc. In New York state there is special legislation regulating the practice of midwifery applying to Erie, Monroe, Niagara and Chautauqua counties, but Miss Crowell found that while this law has operated toward raising the standard of efficiency among midwives in those sections of the state, the enforcement of the limitations under which the licenses are granted is entirely neglected. In proof of this statement Miss Crowell relates interviews with some Buffalo midwives, whose obstetric bags were quite as dirty as that of the average New York midwife

Leprosy Conference in Argentina and Leprosy in General.—The resolutions adopted by the delegates from the various provinces at this conference, held recently at Buenos Ayres, advocated compulsory notification and isolation of all cases of leprosy The direct or indirect transmissibility of the disease was emphasized, and the appointment of medical officers at the ports to prevent the admission of lepers was also advocated, with research by experts on the various mosquitoes of the different provinces where leprosy is on the increase The passage of a national public health bill was also urged The *Semana Medica* has published some of the detailed reports of the delegates In Corrientes the proportion of lepers has increased by 82 5 per cent since 1898 and it is now 0 87 per thousand for the entire country In British India it is cited as 0 33, in Hawaii, 15 per cent , in Colombia, 7 5 per thousand, in Brazil, 0 19, and in Argentina 0 87 per thousand, but in certain provinces the proportion reaches 3 43 per thousand A B Pont cited a number of instances of conjugal leprosy, and also of double and triple conjugal contagion Many of the cases cited by others as inherited leprosy are much more probably due to direct contagion, he thinks In his experience the children of lepers, if removed at once from the home environment, escaped the disease On the other hand, healthy children suckled by leprous nurses acquired it Apparently sporadic cases of leprosy always proved to be merely remote links in the leprosy chain In the province of Corrientes the disease affects the well to do more than the poor He urged sanitarium treatment of the lepers in an isolated colony on some island off the Atlantic coast, believing that clinical cure may in certain cases be attained by appropriate treatment

An endemic focus of leprosy has recently been discovered in Switzerland, 6 new cases have developed since 1898, although only 17 are known in the entire country Jadassohn urges isolation of lepers in the endemic focus in a special colony, allowing visits from friends (*Cor Bl f schw Aerzte* xxxvii, Nos 1 2) He advises notification of all cases and investigation of the home conditions by experts to decide whether the patient should be isolated or allowed to remain at home under medical oversight, the general government to assume all or part of the expense of isolation, and to enact a general law along these lines in respect to leprosy, endemic or imported. Since the discovery of the focus at Memel, Germany has enforced strict regulations against leprosy In France and some other countries physicians have urged the importance of regulation but nothing official has been done, and physicians do not know what to do with a leper patient when one is encountered Eichhorst, for example, relates the

case of a boy sent from Brazil to school in Switzerland who developed symptoms of leprosy three months after his arrival in 1905 He would not be readmitted to Brazil if sent back

The Teaching of Anatomy—The position of anatomy in America, according to Prof F P Mall (*Science*, Jan 25, 1907), has varied according to the view taken of its purpose and scope Under the influence of so called practical methods it was made largely a stepping stone to surgery and the progress of anatomic science and its effective teaching to medical students was thereby hindered The result was a decadence in American anatomy which found its most worthy representatives not among medical men, but among zoologists, biologists, etc In some universities a thoroughly trained professional anatomist taught the subject in the department of pure science, while the position of teacher in the medical school with its wider opportunities for influence and usefulness was filled by a physician or surgeon engrossed with other professional interests Naturally the result of this division was that much of the best work of Europe was known in this country to but few and the conception and sphere of anatomy were unduly restricted A new development in medical teaching is going on While anatomy is well represented in college and university departments not connected with medical schools, we must look for the highest development to anatomy in connection with medical education In order to be more effective in the training of scientific physicians we are gradually making our anatomic instruction more and more inductive and this naturally reacts on the instructor in a beneficial way The study of anatomy begins with the cell and ends with the entire individual and in a medical school should include histology, histogenesis and embryology, and should cover vertebrate anatomy in the fullest sense Investigation should be encouraged for scientific reasons regardless of the immediate prospect of practical application Medical schools are largely hampered in this respect by the fact that anatomic professorships are unendowed and are held by men who, not being professional anatomists, have rarely the time to devote to teaching students nor the requisite training to enable them to develop the department properly The proper advancement of anatomy demands the coöperation of many more productive anatomists The effort of the Association of American Anatomists devoted to the advancement of anatomic science will result in bringing the best men together, and it is to be hoped that those in authority in various communities will recognize the broader scope of anatomy and seek productive anatomists, when vacancies occur, so that this grand science may be raised to the level it has always held in Europe

An Estimate of Eddyism—Because of a decision rendered against an Eddyite, Judge Gray of Indiana was attacked through the public press His answer is so terse and pointed that it is worth quoting

"The argument that people get well under their ministration, and that many people believe in the doctrine, proves nothing Thousands of people got well without medicine or prayer or faith hundreds of years before Mrs Eddy was born Every educated physician knows that the inherent recuperative forces of the human organism tend to restore the afflicted The doctor seeks to aid by furnishing favorable conditions Nature heals a cut It is only the simpleton who would sing or pray when the gaping wound ought to be sewed up A broken leg will get well after a fashion without treatment of any kind, but much sooner and better under intelligent coaptation Prayer won't set a broken leg and it is humbug to talk about it. Prayer will not destroy the germs that cause consumption, malaria, typhoid, diphtheria or even the itch The human organism cures medicine assists That some good people believe in Christian Science proves no more in its favor than the same fact proves the infallibility of Mormonism or Mohammedanism Some people will believe anything, especially if afflicted in body and mind Sometimes the more ridiculous the proposition the more intense the faith And then, again, Christian Scientists claim that it is God that does the curing and that they are the only fellows that can get him at it What do you think of that? Now if God is going to give direct assistance in curing the sick why should he not aid the Christian physician who probably knows more about science than a carload of so called healers? Christian Scientists claim to be the only fellows that are obeying the 'dual commandment to preach the gospel and to heal the sick Better turn and reread that commandment again Here it is 'Go ye to the lost sheep of the house of Israel and as you go, preach saying, the kingdom of heaven is at hand Heal the sick, cleanse the lepers, raise the dead cast out devils' This is the golden text of Christian Scientists They scold the people because they only preach, while they do the whole thing But they don't They violate the commandment constantly First they are commanded to go to the lost sheep of the House of Israel They don't do it at all They never treat a Jew Not much The Jews are too smart to be caught that way They work on the Gentiles exclusively"

Comment seems superfluous except to add that the points brought out by the judge are so self evident that it seems strange that educated people can be found who will believe such preposterous nonsense as is the "philosophy" of the followers of Mrs Eddy It is a psychologic study of no mean proportion to determine what the etiologic factors are which bring about the mental state necessary to the acceptance of such an absurd combination of truth and fallacy

Official Report on Thyroid Treatment of Endemic Cretinism.—THE JOURNAL called attention on page 848 of vol xlii, 1904, to von Jauregg's success with thyroid treatment of cretinism on a large scale His latest report on the subject is published in the *Wien Klin Wochschr* for Jan 10 1906, xx, No 2, page 33 Three years and more have passed since treatment was commenced in nearly a hundred cases, and the results are tabulated under various headings All degrees of cretinism and all ages were unmistakably benefited by the treatment, but the finest results were obtained with the younger children Complete cure is the rule in the milder cases, without serious impairment of the hearing when treatment is begun in early infancy (at six weeks in one case) The enlargement of the tongue and of the thyroid are the most positive signs of cretinism in the infant The shape of the nose and the complexion are not characteristic at this early stage, and the myxedematous swellings are not observed until after the end of the first year Early diagnosis of acquired cretinism is still more difficult Backwardness in learning to walk and talk is the most reliable sign In the endemic regions the parents are now being educated to watch for the early signs One thyroid tablet is given every second day for a year or half a tablet every day, and the improvement gained persists and progresses after suspension In some of the cases backwardness in learning to talk suggested the possibility of cretinism although other signs were lacking He did not hesitate to put the child on thyroid treatment with the usual prompt benefit Assuming that in an endemic focus this anomaly was possibly the insidious onset of acquired cretinism In any event, his experience has been that the thyroid treatment is entirely harmless He adds that sheep thyroids weighing more than 3 or 4 gm should not be used as they are liable to be pathologic Goiter has been observed in sheep

New Researches on Treatment of Epilepsy—The *Archives de Neurologie* for September contains an article by Voisin and V Rendu describing extensive experiences with the administration of bromids and deprivation of salt in the treatment of epilepsy Their conclusions are to the effect that the interposition of a period of deprivation of salt and of bromid in the midst of treatment with large doses of bromids has a very beneficial effect in cases of "essential epilepsy with numerous seizures These brief periods of 'dechloridation' rest the organism without entailing the inconveniences observed with other technics They also prevent too intense action of the bromids, which in time does more harm than good as the necessary nervous reaction becomes exhausted Increasing the amount of the bromids on an ordinary diet the same results as are obtained with small salt diet They give 4 gm of [illegible] 10 gm for 10 days, with [illegible]

periods, followed by 10 days without either salt or bromid. These doses apply to adults and generally also to young people from 16 to 18. The various details of their experiences are tabulated, showing that this dosage was worked out on the basis of wide experience with larger and smaller doses, the former proving unnecessary and the latter inadequate.

The Brain Cortex and Blood Pressure—W. Lewandowsky and E. Weber (*Med. Klinik*, II, No. 15) find that there is in the cortex of dogs and cats a limitable region, irritation of which causes rise of blood pressure and that it is not coextensive with the motor zone, but in cats is situated more anteriorly. The blood pressure induced by its irritation affects especially the splanchnic circulation, driving the blood toward the periphery. They have not been able, experimentally, to demonstrate relations of the cortical regions to limited regions of the body, but think it probable that such exist. Such phenomena as unilateral differences of temperature and edema in hemiplegia, when a secondary effect of the muscular paralysis can be excluded, make it seem probable that similar centers exist in the human subject.

The Arsenical Treatment of Diabetes—H. Verdalle, Bordeaux, in *Archives Générales de Médecine*, March 20, 1906 claims that the treatment of diabetes by the saline arsenical waters of Bourboule is very effective, especially in the type characterized by hyperfunctioning of the liver. It affects alike both the glycosuria and azoturia, regulates the nutrition and causes marked improvement in the general health, often succeeding when alkalies have failed or have even been harmful. While the treatment at the local source of the waters is advisable the exploited waters can also be of use, but, nevertheless, under the direction of a physician. Verdalle reports a number of cases and claims that in no case had the treatment at the watering place produced any inconveniences or accidents when properly carried out.

Association News

THE ATLANTIC CITY SESSION

Arrangements for the Fifty-eighth Annual Session Well Under Way

The following brief extract taken from the preliminary report of the Committee of Arrangements to the Board of Trustees, Feb. 1, 1907, at Chicago, is published for the purpose of announcing the general and section headquarters. The report also includes the names of the chairmen of the executive and auxiliary committees. Arrangements are already well under way, and everything is progressing very favorably. Atlantic City is preparing to give those who attend the coming session in June even better accommodation than heretofore, there being more hotels and larger ones than when the Association last met in Atlantic City. Special attention is being given to locating the section headquarters in hotels directly on the beach front and contiguous to the Boardwalk. The section meeting places are being grouped as closely together as rooms providing commodious accommodation can be obtained. It will be the endeavor of the Trustees' committee, ably assisted by the auxiliary committee, to provide for the members of the Association the greatest amount of comfort, within a short radius, and at a minimum expense, as is shown by the following memoranda.

HEADQUARTERS

GENERAL HEADQUARTERS Marlborough Blenheim

PRACTICE OF MEDICINE Hotel Dennis
SURGERY AND ANATOMY Hotel Chalfonte
OBSTETRICS AND DISEASES OF WOMEN Haddon Hall
DISEASES OF CHILDREN Hotel Traymore
NERVOUS AND MENTAL DISEASES Hotel Brighton
OPHTHALMOLOGY Hotel Seaside
LARYNGOLOGY AND OTOLOGY Hotel Strand
PATHOLOGY AND PHYSIOLOGY Hotel Shelburne
HYGIENE AND SANITARY SCIENCE Hotel St. Charles
PHARMACOLOGY AND THERAPEUTICS Hotel Marlborough
CUTANEOUS MEDICINE AND SURGERY Hotel Marlborough
STOMATOLOGY Hotel Traymore.

General headquarters for registration information, commercial exhibits and scientific exhibits will be on Young's Pier.

LOCAL COMMITTEE

The following is the local or auxiliary committee:

CHAIRMAN FOR BOARD OF TRUSTEES A. M. A. Philip Marvel, M.D., 1616 Pacific Ave.
LOCAL CHAIRMAN W. Blair Stewart, M.D., Pacific and North Carolina Aves.
SECRETARY Edward Gulon, M.D., 1408 Atlantic Ave.
TREASURER J. A. Joy, M.D., 1020 Pacific Ave.
HALLS AND SECTION MEETING PLACES Walt P. Conaway, M.D., 1723 Pacific Ave.
COMMERCIAL EXHIBITS Edward Gulon, M.D., Atlantic Ave.

(All correspondence concerning the reservation of space for exhibits should be addressed to the American Medical Association, 103 Dearborn Avenue, Chicago.)

REGISTRATION E. H. Harvey, M.D., 20 N. Florida Ave.
BUREAU OF INFORMATION Milton S. Ireland, M.D., 25 S. California Ave.
BADGES Clara K. Bartlett, M.D., 10 N. Carolina Ave.
HOTELS W. E. Jonah, M.D., 1616 Pacific Ave.
FINANCE Eugene L. Reed, M.D., Pacific and Virginia Aves.
GENERAL ENTERTAINMENTS Emery Marvel, M.D., 811 Pacific Ave.
SECTION ENTERTAINMENTS J. W. Snowball, M.D., 1519 Pacific Ave.
LADIES ENTERTAINMENT Mrs. A. D. Cuskaden, 2 S. Michigan Ave.
PROGRAM AND PRINTING George Scott, M.D., 1100 Pacific Ave.
SCIENTIFIC EXHIBITS E. I. Porteous, M.D., 811 Pacific Ave.
RECEPTION (To be named)

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address but the request of the writer not to publish name or address will be faithfully observed.

FORMULA OF CASTORIA

WASHINGTON, D. C., Feb. 9, 1907.

To the Editor:—Can you give me any information regarding the composition of castoria manufactured by the Centaur Company, New York? I wrote to this company nearly a year ago but have received no answer. Castoria is extensively used in Washington as a laxative and soothing agent. I am told that in addition to its laxative effect it makes babies sleep. A patient who has observed this effect in her own child told me that her sister kept her baby under the influence of castoria all the time.

B. M. RANDOLPH, M.D.

ANSWER.—According to the patent, the formula is as follows: To 135 pounds of senna leaves add 35 gallons of water at 65° C. in which has been dissolved 48 ounces of sodium bicarbonate. Exhaust the senna by percolation until 240 pounds are obtained. In this dissolve 210 pounds of sugar and 4 ounces of Rochelle salts, then add spirits of gaultheria 18 pints and spirits of pepo, spirits of chenopodium (wormseed), spirits of peppermint and spirits of anise of each 2 ounces. The patent on the process having expired by limitation some years ago, it was discovered that the name also reverted, along with the process to public use and various parties began the manufacture of castoria. The owners of the original patent began legal proceedings against the infringers and succeeded in all but one instance in prohibiting any one from making castoria or vending any article under that name except that made by them. In one instance the case was carried to the United States Supreme Court which in an opinion written by Justice Brewer, held that the patent on the process having expired the name 'Castoria' being the only name to designate the article became a common name and therefore free for use. The design, style and signature of the package being copyrighted can not be imitated hence the tremendous effort on the part of the original manufacturers to familiarize the public with the signature of a person who manages the business for the present owners. Dr. J. G. Reinberg, McBain, Mich., in THE JOURNAL, March 17, 1906, reports the case of a child, aged 10 months, who became comatose and whose pupils did not react to light after having received half a teaspoonful of castoria.

POISONING FROM OIL OF TANSY

SHILOH, OHIO, Feb. 4, 1907.

To the Editor:—During the past six months several cases of poisoning from oil of tansy have been reported in THE JOURNAL, and I wish to add another. I was called to see a young married woman, aged 20, and found her in a semiconscious condition from which she was rather easily roused. She vomited considerably and the vomitus contained some bright red blood which evidently came from the stomach. Respiration and pulse were increased and the pupils were dilated. The woman complained of severe abdominal pain for which I administered morphin gr. ⅛ hypodermically. Further treatment consisted of rest in bed, calomel followed by a saline and then a mixture of pepsin and bismuth to relieve the vomiting which recurred at intervals for several days. The woman made a complete recovery in about twelve days. She acknowledged having taken a dram of oil of tansy with the intention of producing abortion; this result however was not attained.

N. P. McGAY, M.D.

ANOTHER CURE FOR INCURABLE DISEASES

Dec 26 1906

To the Editor —Your address has been given to me by Dr ——— of our city who thinks that you may be able to assist me in reaching Dr Denslow mentioned in the newspaper clipping enclosed I have been waiting for some months, hoping to see the matter reported in our American medical papers but now take this action in an effort to be able to reach Dr Denslow by letter I am suffering from locomotor ataxia and have just been compelled to give up my employment. I have been very much helped up by the hope that Dr Denslow may be able to cure me or at least better my condition to enable me to do my work * * *

The clipping is as follows

LOCOMOTOR ATAXIA CURABLE

London April 18 —A cure for locomotor ataxia has been discovered according to the *Express* by Le Grand Norton Denslow an American doctor living in London. Already the paper says, Dr Denslow has effected several remarkable cures. He promises to take the medical profession into his confidence as soon as he perfects the details of the discovery The disease has hitherto been considered incurable though it has been possible to stay its progress

ANSWER.—To this letter (from a layman) so characteristic of the average unfortunate sufferer who grasps at any hope of relief and written because of an alleged news cablegram that bears so many earmarks of fraud we replied regretting very much the necessity of discouraging our correspondent that the announcement of a cure for incurable diseases is a not uncommon preliminary to a further advertisement of some patent medicine (Our readers will remember the Bioplasm clipping so similar in some respects on which we commented in THE JOURNAL, Nov 18 1905 page 1587) We said further that we would endeavor to learn something further from London

We now learn from our London correspondent that on June 9 1906 an American giving the name of Le Grand N Denslow was summoned before the police magistrate of Marylebone and fined $150 and costs for falsely using the title of doctor of medicine. It is stated that the evidence showed that the defendant had taken rooms at 38 Harley street and that he had advertised widely that he was able to cure locomotor ataxia. It is further alleged that he offered treatment at 500 guineas ($2 625) and also announced he would soon raise his price to 1000 guineas ($5 250) as the cure cost him $750 The defense claimed that Denslow was no charlatan but was a fully qualified and highly educated medical man and that he supposed he could use the title of doctor so long as he did not imply that he was an English doctor It was stated that he held numerous medical qualifications and that he had practiced in America since 1876

The only name resembling the above is found in the 1902 edition of the Medical Directory of New York New Jersey and Connecticut in which the name of LeGrand Norton Denslow appears as located at 49 W 44th St., New York and as a graduate of the College of Physicians and Surgeons of New York in 1876 In the edition for 1904 the same name appears with the address given as 86th St. and Broadway New York City There is no such name entered in the same directory for 1905 nor for 1906 neither does it appear in the new American Medical Directory Although the names are similar it is impossible to say positively whether or not they belong to the same individual Our readers can draw their own conclusions from the facts submitted.

A PHYSICIAN'S EXPERIENCE WITH THE AUTOMOBILE

CAZENOVIA, N Y, Feb 13 1907

To the Editor —In THE JOURNAL February 9 a letter gave the cost of running an automobile as a doctor's conveyance, and, while the figures are no doubt correct it seems to me rather more than one should pay for the service rendered I have a machine which cost as it stands including lamps etc. about $450 The car has been in use since May 1906 has never been out of service for repairs but once, and has cost from $9 to $12 a month The doctor with some mechanical ingenuity who really wishes to use a car of light weight as a substitute for horses, and who is willing to do his own repairing and adjusting may figure his running expense at $15 a month for a mileage equal to two good horses One must remember that the highways were built for horse-drawn vehicles and if a machine is driven at high speed the driver must expect to pay well for his fun As a rule my car is driven ten or twelve miles an hour, which is as rapid as comfort and safety will permit in this hilly country The time required to keep the car running properly is about three hours a week. This does not include the time spent in washing the machine

F D KEPPEL

BARTLETT METHOD OF CATGUT STERILIZATION

HOLYOKE MASS Feb 14 1907

To the Editor —Kindly give me in your Queries and Minor Notes column the address of Dr Bartlett, originator of the Bartlett method of catgut sterilization? S A. MAHONEY

ANSWER —Dr Willard Bartlett 4277 Washington Boulevard St Louis

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers U S Army week ending Feb 16 1907

Maus Louis M deputy surgeon general ordered to inspect all posts in the Department of Texas

Brown O G asst surgeon granted two months and 20 days leave of absence

Wilson Compton asst surgeon resignation of his commission as an officer of the Army has been accepted by the President to take effect Feb 15 1907

Buck C D asst. surgeon having completed the duty for which he was ordered to this city will return to his proper station Army General Hospital Presidio of San Francisco granted 12 days leave of absence

Krebs Lloyd Le R asst surgeon granted five days leave of absence

Heard Geo P asst. surgeon leave of absence extended 30 days.

Deshon George D surgeon detailed member Army Retiring Board to meet at Omaha, Neb vice Lieut. Col John M Banister deputy surgeon general hereby relieved

Devereux J R asst surgeon resignation of his commission as an officer of the Army has been accepted by the President to take effect June 30 1907

Gregory Junius C asst surgeon relieved from temporary duty at Presidio of Monterey Cal and will proceed to San Francisco and take station at that place resuming his duties in the Army Transport Service

Rich Edwin W asst surgeon appointed member of examining board to meet at Madison Barracks N Y

Sievers Robert E. contract surgeon left Fort William Henry Harrison Mont and arrived at Fort Keogh Mont for temporary duty

Brown W E contract surgeon returned to duty at Fort Walla Walla Wash from leave of absence

Chase Alpha M contract surgeon left Fort Sam Houston Tex on leave of absence for one month

Pinquard Joseph contract surgeon returned to duty at Fort Leavenworth Kans from leave of absence

Stone Frank P dental surgeon returned from Fort Bliss Texas to Fort Sam Houston Texas ordered to Fort McIntosh Texas for emergency work

Navy Changes

Changes in the Medical Corps U S Navy for the week ending Feb 16 1907

Schwerin, L H acting asst surgeon detached from the *Celtic* when placed out of commission, and ordered to the Naval Hospital Norfolk, Va

Heiner R. G., asst. surgeon ordered to additional duty at the Naval Proving Grounds Indian Head Md

Public Health and Marine-Hospital Service

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Feb 14 1907

White, J H surgeon directed to proceed to Jump Point La for special temporary duty on completion of which to rejoin station at New Orleans

Cofer L E P A surgeon relieved from temporary duty at Ellis Island N Y effective Feb 3

Cofer L E P A surgeon granted leave of absence for 16 days beginning Feb 4

Cofer L E P A surgeon directed to proceed to Coatzacoalcos and Salina Cruz Mex and San Francisco for special temporary duty on completion of which to rejoin his station at Honolulu Hawaii

Glover M W P A surgeon granted 5 days leave in January 1907

Glover M W P A surgeon leave of absence granted for one month from Jan 12 1907 amended to be effective from Jan 27 1907

Boggess J S P A surgeon on the return of Asst Surgeon T H Mullan relieved from temporary duty at Perth Amboy N J., and directed to report to the medical officer in command Stapleton N Y for duty and assignment to quarters

Salmon T W asst surgeon granted leave of absence for two days in January 1907 under Paragraph 191 Service Regulations

Ashford F H asst surgeon granted leave of absence for one day in January 1907 under Paragraph 191 Service Regulations

Miller W W asst surgeon granted leave of absence for one day in January 1907 under Paragraph 191 Service Regulations

Delgado J M acting asst. surgeon granted leave of absence for thirty days on account of sickness from Jan 1 1907

Foster S B acting asst. surgeon granted leave of absence for 11 days from Feb 9 1907

Claycock A acting asst surgeon granted leave of absence for one day in January 1907 under Paragraph 210 Service Regulations

Coldsborough P W acting asst surgeon granted leave of absence for 14 days from Feb 4 1907

Kennard K S acting asst surgeon granted leave of absence for one day in January 1907 under Paragraph 210 Service Regulations

Monsure J A acting asst surgeon granted leave of absence for thirty days from Feb 10 1907

Wetmore W O., acting asst surgeon granted leave of absence for six days in January 1907 under Paragraph 210 Service Regulations.

Wilson J G acting asst surgeon granted leave of absence for two days in January, 1907 under Paragraph 210 Service Regulations

Woods C H, pharmacist, granted leave of absence for thirty days from Jan 7 on account of sickness

Allen, G C pharmacist, directed to report to Surgeon W G Stimpson, chairman of board for physical examination to determine his fitness for promotion to grade of pharmacist of the first class

Rogers Edward, pharmacist directed to report to Surgeon P H Bailhache chairman of board for physical examination to determine his fitness for promotion to grade of pharmacist of the first class

Health Reports

The following cases of smallpox, yellow fever cholera and plague have been reported to the Surgeon General Public Health and Marine-Hospital Service during the week ended Feb 15 1907

SMALLPOX—UNITED STATES

Connecticut Stamford Jan 1-31, 1 case
Georgia Augusta, Jan 29-Feb 5 2 cases
Illinois Galesburg Jan 26 Feb 9 26 cases
Indiana Indianapolis Jan 27 Feb 3 9 cases Lafayette Feb 4-11 6 cases, South Bend Jan 26-Feb 9, 5 cases
Iowa Clinton, Jan 27 Feb 3 1 case.
Kansas Kansas City, Feb 2 9 1 case
Louisiana New Orleans, Jan 28-Feb 4 3 cases (2 imported)
Michigan Detroit Feb 2-9, 2 cases Kalamazoo Jan 26-Feb 2 2 cases
Missouri St Joseph Jan 26-Feb 2 30 cases, St. Louis Jan 26-Feb 11, 3 cases
New York New York, Jan 26-Feb 9 3 cases 1 death
South Dakota Sioux Falls Jan 26-Feb 2 2 cases
Texas Houston Jan 12 Feb 2, 11 cases
Washington Spokane, Jan 19 Feb 2 11 cases
Wisconsin La Crosse Feb 2 9 1 case Milwaukee, Jan 19 Feb 9, 14 cases

SMALLPOX—FOREIGN

Africa Cape Town Dec. 15 22 1 case.
Brazil Pernambuco Dec 15-31 48 deaths Rio de Janeiro Dec 30 Jan 6 1 case.
Canada Sherbrooke Feb 9 4 cases
China Hongkong Dec. 1 22 4 cases 3 deaths Shanghai Dec 23 30 1 case
France Paris Jan 12 19 14 cases 1 death
Great Britain Hull Jan 12 19 2 cases
India Madras Dec 15-21 2 deaths
Netherlands Rotterdam Jan 19 26 5 cases
Russia St. Petersburg Dec 27 Jan 12 6 cases 3 deaths
Spain Seville Dec. 1 31 40 deaths
Africa Senegal and Niger Nov 1 30 35 cases 26 deaths
Mexico Vera Cruz Feb 8 1 case (Imported)

CHOLERA

India Bombay Jan 1-8 4 deaths Rangoon Dec 22 29 21 deaths

PLAGUE.

Brazil Pernambuco Dec. 15 31 1 death Rio de Janeiro Dec 30 Jan 6 20 cases 5 deaths
India Bombay Jan 1 8 26 deaths Rangoon Dec. 22 29 23 deaths
Peru Callao Jan 5 12 2 cases 1 death Chickayo Jan 1 5 cases, 3 deaths Mollendo 1 death Paita City and vicinity Jan 1 6 cases 1 death San Pedro and Pacasmayo 10 cases 4 deaths Trujillo 14 cases 5 deaths

Marriages

CHARLES A CRANE, M D, to Miss Mabel Putt, both of Canton, Ohio recently

FRED H HUNTLEY, M D, to Miss Maud Williams, both of Manton, Mich, February 6

S YOUREE ALEXANDER, M D, to Miss Florence Jacobs, both of Shreveport, La February 6

WALTER M REEDY, M D, Scranton, Pa, to Miss Mary Teresa Healey, of Dunmore, Pa, February 7

DAVID W WENSTRAND, M.D, Milwaukee, Wis, to Miss Gertrude Walters, of Chicago, Dec. 24, 1906

JOHANNES G OOSTERBECK M D to Miss Blanche Pemberton, both of South Bartonville Ill, February 6

JAMES F GAFFNEY, M D Lowell Mass, to Mrs Ethel Roberts Sawyer, at Providence, R I February 6

FRANK ERNEST SOHLER M D San Francisco, to Miss Luella May Bremner, of Santa Rose, Cal, February 2

CHARLES MCKINNEY NICE M D Palos, Ala to Miss Helen Gilberta Adams of Germantown, Pa February 5

RALPH FREDERICK BACON M D Milwaukee Wis to Miss Mabel Rebecca Hoyt, of Brooklyn, N Y Oct 16, 1906

FRANK TERRY BROOKS M D Greenwich Conn to Miss Madeline Conker of New Hampshire, at Honolulu, H I, January 21

Deaths

Sir William Hales Hingston, M.D McGill University Medical Department, Montreal, 1851, L.R.C.S, Edinburgh, 1852, L.L.D, D.C.L, F.R.C.S, England, for many years dean of the medical profession of the Dominion of Canada, professor of clinical surgery at Laval University, Montreal, surgeon in chief of the Hotel Dieu, Montreal, formerly mayor of Montreal, president of the provincial board of health in 1876 and 1877, senator of the Dominion of Canada, knighted in 1895, died at his home in Montreal, February 19, aged 78

Henry Joseph Gaffney, M.D Medical School of Harvard University, Boston, 1870, government inspector of Indians at Charlottetown, P E I, but since 1872 a resident of Salem, Mass, a member of the Massachusetts Medical Society, Essex South District Medical Society, fellow of the Royal College of Physicians, London, a member of the local board of overseers of the poor for five years, and of the school board for nine years, died at his home in Salem, February 10, suddenly, from heart disease, aged 59

John de Barth Walbach Gardiner, M.D University of Georgetown, University of Maryland School of Medicine, Baltimore, 1863, surgeon in the Confederate service in the Civil War, who was admitted to the Medical Department of the Army as lieutenant and assistant surgeon in 1875, was made captain and assistant surgeon in 1880, and was retired on account of disability in line of duty in 1891, died at his home in Pleasant Hill, Md, February 5, aged 64

William C Pickett, M D Jefferson Medical College, Philadelphia, 1895, a member of the American Medical Association demonstrator in neurology in Jefferson Medical College and later professor of nervous diseases in the Medico Chirurgical College, a member of the Major Staff of the Hospital Physicians, president of the Philadelphia Neurological Society, died at his home in Aldan, Pa, February 5, from acute articular rheumatism, aged 37

Alexander C Burns, M.D University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1877, chief of the surgical staff of the City Hospital, Huntington, W Va, for 15 years, once a member of the board of education of Getaway, Ohio, and later a member of the Huntington board of education, died suddenly at his home in Huntington, February 2, from cerebral hemorrhage, aged 58

William H. Kennedy, M D University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1904, deputy clerk of Snohomish County, Wash, from 1891 to 1896, and afterward a practitioner at Montague and Ravenna, Mich, a member of the state and county medical societies, died in Mercy Hospital, Muskegon, February 6, from myocarditis, after an illness of ten weeks, aged 38

Charles C Merrill, M.D University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1863, surgeon in the Army throughout the Civil War, for several years a member of the staff of the Newburg Insane Hospital, Cleveland, Ohio, and thereafter a practitioner of Marshallville, Ohio, died at the home of his brother in Kankakee, Ill, February 5, aged 74

John Blackwood Strachan M D University of Pennsylvania, Department of Medicine, Philadelphia, 1852, surgeon in the Confederate service throughout the Civil War, and said to have been the oldest practitioner of Petersburg, Va, died at his home in that city, February 6, after a prolonged period of invalidism, aged 77

Horace Campbell, M.D College of Physicians and Surgeons in the City of New York, 1899, a member of the state and county medical societies, coroner of Chehalis County, Wash, and chief of staff of the Hoquiam Hospital, died suddenly at Hoquiam, February 1, from fatty degeneration of the heart, aged 34

James Francis McCarthy, M.D Minnesota Hospital Medical College Minneapolis, 1883 a member of the American Medical Association and a leading member of the medical profession of Dubuque, Iowa, died in Iowa City February 10, five days after an operation for hernia, aged 49

Oscar Gaudet, M D Tulane University of Louisiana, Medical Department, New Orleans, 1861, a Confederate veteran, for four terms coroner of St James Parish, and one of the most esteemed citizens and practitioners of Paulina, La, died at his home February 7 aged 68

Luke M Doyle, M.D Rush Medical College, Chicago, 1897, of Burnside Chicago a member of the American Medical Association died in Wesley Hospital Chicago, February 19, from appendicitis, after an illness of one week, aged 32

H. H Barncastle, M.D Memphis (Tenn) Hospital Medical College 1891, a member of the state and county medical societies, of Haughton, La , died in the Shreveport (La) Sanitarium, February 8, after a prolonged illness and two weeks after an operation on the liver

Franklin Wheeler, M D College of Physicians and Surgeons in the City of New York, 1852, a member of the state and county medical societies, died at his home in Farmington, Conn., February 10, from cerebral hemorrhage, after an illness of five days, aged 79

Thomas Edwin Nott, M.D - Medical College of the State of South Carolina, Charleston, 1852, who served throughout the Civil War as surgeon in the Confederate service, died at his home in Spartanburg, S C , January 19, after an illness of a year, aged 76

Louis Dwight Shipman, M.D College of Homeopathic Medicine and Surgery of the University of Minnesota, Minneapolis, 1896, a member of the faculty of that institution, died at his home in Minneapolis, February 5, from diphtheria, aged 31

Henry Harris Davidson, M.D New York Medical College, New York City, 1864, at one time coroner of Suffolk County N Y , and health officer of Northport, L. I , died at his home in that village, from pneumonia, February 5, aged 67

George Wasson Grove, M.D Tulane University of Louisiana, Medical Department, New Orleans, 1890, of Kansas City, Mo , died in St. Joseph's Hospital in that city, February 8, four weeks after an operation for appendicitis, aged 54

Samuel W Rutledge, M.D Homeopathic Medical College, St Louis, 1876, sometime member of the State Medical Board of North Dakota, died at his home in Grand Forks, February 3, from kidney disease, after a long illness, aged 54

Marshall E Leatherman, M.D College of Physicians and Surgeons, Baltimore, 1873, a specialist in genitourinary surgery, of Washington, D C , died at the home of his father in Frederick County, Md February 8, aged 55

William Henry Pearce, M.D Ohio Medical College, Cincinnati, 1845, who retired from practice in 1860, died at his home in Eureka Springs, Ark., from nervous shock, 14 hours after a street railway accident, January 23, aged 91

Isaac E Myers, M.D Western Reserve University Medical College Cleveland, 1867, a veteran of the Civil War, died at his home in Shelby, Ohio, February 9, from cardiac dropsy, after an illness of two years, aged 67

Charles Wesley Benson, M.D University of Maryland School of Medicine Baltimore, 1860, of Baltimore, died at the Union Protestant Infirmary in that city February 10, after an illness of six weeks, from diabetes, aged 69

Henry Z Gill, M.D Jefferson Medical College, Philadelphia, 1857 a veteran of the Civil War, and a member of the American Medical Association died at his home in Long Beach, Cal , February 6, aged 76

James Thomas Marsh, M.D Washington University, Medical Department St Louis 1860 a member of the American Medical Association, of Liberty, Mo , died February 9, from pneumonia, aged 73

John Andrew Warde, M.D Medical College of Ohio Cincinnati, 1890, of Dubuque, Iowa, died at Mercy Hospital in that city, February 7, from spinal meningitis, after a long illness, aged 40

Frederick C Segelke, M D Milwaukee Medical College, 1902, formerly of Ten S D , died suddenly in Milwaukee February 2, from the effects of an overdose of morphine, aged 27

Joel E Whitmar, M.D University of Wooster, Medical Department, Cleveland 1873 a veteran of the Civil War, died at his home in Millersburg, Ohio February 4, aged 63

Louis D Levi, M.D Louisville (Ky) Medical College, 1879, died at his home in New Albany, Ind , February 9, from influenza, complicated with diabetes, aged 47

Jesse B Lung, M D College of Physicians and Surgeons, Keokuk, Iowa 1877 died at his home in Brooklyn, February 9 after a short illness aged 71

George Liebrock, M.D Homeopathic Medical College of Missouri, St Louis 1878, died at his home in Mascoutah, Ill , January 24 aged 78

John M Modricker M.D University of Berlin Germany 1858, of Wabash Ind , was run over by a buggy, and died February 10 aged 73

Oscar Morrill Ide, M.D College of Physicians and Surgeons Chicago, 1894, died at his home in Chicago January 19 aged 35

S Pruyn Patterson (Years of Practice W Va) died at his home in Huntersville W Va , January 14, aged 68

Medical Organization

DR. McCORMACK'S CAMPAIGN IN ALABAMA.

W H. Sanders, M.D
Health Officer of Alabama.
MONTGOMERY, ALA

Dr McCormack completed a campaign in this state January 18, having visited twenty two places and delivered about forty addresses to the people and the profession, and one to the joint houses of the legislature In estimating results, the effect on the people, on the profession, and on the members of the legislature will be referred to

Popular addresses on the part of physicians have been very uncommon in this part of the country, hence considerable difficulty was encountered in persuading the people that an address from a doctor could be otherwise than dry and uninteresting In fact, a considerable percentage of the members of the profession shared this view The result was that while fair audiences were obtained at most places, at none of them did the houses overflow as they should have done and as they would have done had the addresses been repeated at any of the places where they were delivered The effect of the addresses on those laymen who heard them was profound and highly salutary Indeed, the enthusiasm of the lay hearers was deeply aroused by the graphic view of the profession, its aims, its struggles, its unselfish and altruistic work and withal its bickerings and jealousies, so luminously and effectively told by the speaker Everywhere the expressions of appreciation and approval on the part of the lay hearers were lavish cordial and emphatic. As specimens of hundreds of expressions used, the following are quoted An Episcopal rector said "Doctor, if you will remain here until Sunday I will insist on your occupying my pulpit" A lady said "Doctor, that is the best sermon I have heard in a long time"

When the subject was opened for discussion, as was done after the addresses preachers, lawyers, teachers, editors and business men spoke in vigorous and glowing terms of the sentiments that vitalized and warmed the address, pronouncing them both a revelation and an inspiration

The effect on the members of the profession who heard Dr McCormack was strong wholesome and reassuring While the profession in this state is logically and completely organized yet inertia is the anesthetic that is paralyzing more or less the energies of the doctors and that is therefore, robbing organization of some of its richest fruits The addresses were well calculated to rouse them out of this torpid condition, opening up as they did new fields in which their energies might be employed and new methods by which those fields might be cultivated His scheme for graduate study was unique practical and captivating and will no doubt, be adopted and followed by many county societies

The value of harmony and coöperative study was clearly and forcefully pointed out to the doctors and it is to be hoped that they will act on the suggestions offered and resolve to make organization bear in this state the rich fruits of which its author and founder, Jerome Cochran, had such clear and luminous visions nearly forty years ago

The address to the legislature profoundly impressed the members and pointed out to them as they had never seen before the absolute need of a thoroughly organized public health system and the wisdom of providing it with such support as will enable it to accomplish its purposes Numerous expressions of unqualified endorsement of what had been said were heard on the part of the members, and undoubtedly the way to broader and better legislation was greatly clarified Just after the address was delivered Senator McWhorter a prominent member of the profession of the state and now president of the State Medical Association offered the following resolution, which was unanimously adopted

Resolved That the thanks of the Legislature of Alabama be tendered Dr J N McCormack for his very able and illuminating address which has thrown a flood of light on the problems of preventive medicine which we as legislators will be called to deal and which impressed on us the fact that the domain of legitimate legislation has been immensely widened in the light of modern science and by the labors of the medical investigator

As a speaker Dr McCormack is magnetic persuasive and convincing Although he speaks for one hour and a half or thereabouts he holds the attention of his audience from beginning to end with the grip of a vise beguiling his hearers into being unconscious of the flight of t[illegible] the speaker's capacity in this re[illegible] mentioned At one of the meet[illegible] around 15 years of age perch[illegible]

stands provided for flowers at the very rear of the auditorium Knowing the genius of boys of that age for creating a disturbance at such places and times, and for rendering themselves a first-class nuisance, I apprehended that much annoyance would proceed from that quarter of the auditorium, but to my amazement those boys sat as still and listened as attentively as the grown people A bright woman to whom this incident was related very philosophically defended the disposition of boys to misbehave when not entertained by saying that they are honest enough to show it, while grown people are deceitful enough to hide it On this occasion, however, neither did the boys have an opportunity to show their honesty nor the grown people their politeness, for all were broadly informed and highly entertained

To sum up nothing but good can result from Dr McCormack's campaign of education in Alabama

County Societies in Public Health Affairs in Virginia.

To the Editor —In THE JOURNAL, Dec 29, 1906, Dr Parnall asks for information regarding the appointment of members to local boards of health on recommendation of the county societies, or similar medical organizations In Virginia county boards of health consist of the chairman of the board of supervisors the clerk of the county court ,and three physicians appointed by the judge on the recommendation of the county medical society This body selects its own secretary, who is county health officer At this particular time the health officer of Elizabeth City County, who is enforcing the state law in reference to the vaccination of school children, is meeting opposition on the part of some antivaccinationists He is secured against the threats of these faddists by the knowledge that their efforts can be effective only through the aid of his medical brethren W A PLECKER, Hampton, Va.

[The Virginia law which Dr Plecker outlines is certainly an effective and judicious one It practically places the control of the health matters of the county in the hands of the county medical society Such an organization in any state ought to be productive of an immense amount of good We fear the largest possible benefit is not realized in Virginia, however, since there is in that state no connection whatever between the local county medical societies and the state society In fact, so far as our information goes, there are only 12 county medical societies in existence in Virginia out of 100 counties With such a law as Virginia is fortunate enough to possess, and with an active society in each county in the state, all held together by the state society, it would be possible to accomplish results in Virginia which would be unsurpassed in any state —ED]

Co-operation with Pharmacists

Dr J R. Caldwell, secretary of the Ohio County (W Va) Medical Society, reports a joint meeting with the Wheeling Druggists' Association, held in Wheeling, February 15 The following program was given by members of the two organizations, followed by a lunch and social period

Drug Poisoning A Personal Experience	Dr S L. Jepson
Dangers of Drug Substitution	Mr M A. Wallace
What Constitutes Proprietary Remedies	Mr C Menkemeller
Druggists Short-comings	Dr J O Howells
The Integrity of the Druggists	Mr W W Irwin.
What Constitutes a Progressive Up-to-Date Druggist	Mr B Dawson
The Ethics of Prescription Writing	Dr C A. Wingerter
The U S Pharmacopeia and National Formulary vs Proprietary Articles	Mr John Coleman
The Druggist as an Assistant to the Physician	Mr John Ehrle

This meeting offered an excellent opportunity for a discussion on subjects of direct interest to both physicians and druggists and must have been productive of much good. The example of this and several other societies in this matter is worthy of general imitation

Program for the Season.

A very neatly gotten up program is sent us by Dr H. C Frontz, Huntingdon Pa , secretary of the Huntingdon County Medical Society This society was organized in 1872 and now has a membership of 30 The folder names the officers and members of the society, members of various committees, membership dues, dates of annual meetings of county and state societies and American Medical Association, with a program for meetings of the society from March, 1907, to January, 1908

Section for Pathology Study

On December 6 a meeting of the Erie County Medical Society was held to organize a section for the study of pathology Two meetings have been held since that time, at which interesting papers were presented The permanent specimens are eventually to become the property of the Erie County Medical Society and will form a valuable collection for future reference

Society Proceedings

COMING MEETINGS

Assn of American Med Colleges, Richmond Va , March 18 1907
Medical Society of Missouri Valley, Omaha, Neb , March 21 22 1907

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND

(SECTION OF CLINICAL MEDICINE AND SURGERY)

AMERICAN PHARMACEUTICAL ASSOCIATION

(BALTIMORE SECTION)

Joint Meeting, held in Baltimore, December, 1906

Proprietary Preparations

DR HARVEY W WILEY, Washington, D C, outlined his views from the standpoint of an official connected with the Foods and Drugs Act He stated that the remedies offered to the public are either nostrums or proprietaries, or they are recognized by the United States Pharmacopeia or National Formulary, or they are synthetics and proprietary articles protected by patent rights Dr Wiley has never regarded any medicine as a cure, but as an aid to Nature in its efforts to restore health Although every state has enacted laws controlling the practice of medicine and pharmacy, with which the physician or pharmacist must comply before a license to practice can be secured, there is no law to prohibit any man from dispensing a so called cure-all, irrespective of his qualifications or whether he has paid any license fee or passed any examination Dr Wiley holds that if it is right to protect the public against the lack of ability of the pharmacist and the physician, then that protection should be upheld regarding everybody manufacturing for sale or selling nostrums, etc The law should require that everybody who proposes to practice medicine or dispense a remedy should be required to pass the same examinations as do physicians and pharmacists.

The old doctrine was that an ethical remedy was one that published its formula, but many formulas offered to the medical profession have been found to be absolutely false Therefore, the Council on Pharmacy and Chemistry is investigating the remedies which are not mentioned in the United States Pharmocopeia or National Formulary, eliminating those which are false or which are represented under false statements and character Dr Wiley believes that all new remedies should be subjected to the same rigid tests, and should be made to occupy the same position, and that no remedy should be recommended to the profession or to the public that will not meet the provisions laid down by the council

Dr Wiley also stated that the success of every "patent medicine" or nostrum rests on its containing dope or on its being advertised under false pretenses The people are led to imagine that they have diseases they have not in order to induce them to take these medicines Such advertising is vicious and the deception practiced criminal Dr Wiley is of the opinion that this question must be fought out on the following lines Practitioners of medicine and pharmacy must be put on the same plane Because a man has a quack remedy is no reason why he should have privileges under the law By securing efficient legislation the day of quackery will soon pass Dr Wiley deems it strange how the law protects the fakir and the quack in some respects If a man drinks straight whisky, a stamp must be on the package, but the maker of fake whisky does not have to buy stamps, because the government furnishes them It is said that the government paid $500,000 in one year to furnish these stamps for fake whisky manufacturers and for inspectors to put them on

Nostrums and Proprietaries vs United States Pharmacopeia and National Formulary Preparations

DR C U SMITH, Baltimore, said that the manufactured coated pills inaugurated the era of proprietary medicines Prior to this time the profession of pharmacy was on a high plane, and the physician depended on his professional skill to aid him with his therapeutics Following closely on the manufactured pill came the elixirs with their elegant appearance and agreeable taste Then the retail druggist and the manufacturer began the compounding of different combinations,

gradually dropping the name of elixir and substituting trade names Later the synthetics became prominent. These preparations, although patented, have never been looked on by the profession as proprietaries They have displaced medicinal agents of indefinite strength and unreliable physiologic action Dr Smith believes that ethical preparations of this kind have done much for progressive pharmacy and therapeutics

The commercializing of the pharmaceutical and, to a certain extent, of the medical profession, has, in Dr Smith's opinion, been fruitful in multiplying non ethical nostrums Many of the nostrums brought before the medical profession present in their literature impossible pharmaceutic and chemical for mulas Dr Smith approves of the excellent work that is being done by the Council on Pharmacy and Chemistry of the American Medical Association in exposing the fallacy of the claims made for some of these preparations

Dr Smith also called attention to the fact that many old, tried and valuable drugs have been displaced by newer drugs, chemicals and proprietaries He thinks that many factors contributed to this revolution First, the demand for more elegant and palatable preparations Second, many of the new remedies are distinct advances in therapeutics and pharmacy Third higher or better education in medicine has had an appreciable effect on the excessive use of drugs Fourth, the fact that the average medical graduate is poorly educated in pharmacy, pharmacology and therapeutics has led to the wholesale use of ready made prescriptions by such men The majority of medical graduates are lamentably weak in prescription writing Dr Smith is convinced that the use of manufactured prescriptions is unscientific, degrading and harmful Nothing has had more to do with the degeneration of professional pharmacy than the extensive use of proprietaries The art of prescription writing is almost lost, and the pharmacist has become largely a nostrum vendor It hurts the doctor financially, as he puts these remedies into the hands of the laity, and physicians are largely responsible, through the nostrum evil, for making drug fiends of their patients and others

As a remedy for these conditions, Dr Smith suggested the better education of the student in pharmacy, pharmacology and therapeutics The course should be practical, and more attention should be paid to the newer methods of therapeutics and excessive drugging should be discouraged The student should be made better acquainted with the preparations of the Pharmacopeia and of the National Formulary, where he may find most of the combinations of merit that have become popular A closer relationship between the state branches of the American Pharmaceutical Association and the state medical societies in affiliation with the American Medical Association would assist materially in checking the nostrum evil and in improving our materia medica and therapeutics.

Mr H P Hynson was the next speaker His paper will be published in THE JOURNAL later

DISCUSSION

MR. JOHN B THOMAS, Baltimore, believes that the time has come when the physician will appreciate that it is best for him to use the preparations of the United States Pharmacopeia and National Formulary and to forget all about proprietary medicines He said that the local pharmacist is not only willing but glad to prepare any of the preparations of uniform composition and strength, thereby assuring the doctor that his prescription will always be the same, no matter where it is compounded If the physician will prescribe under the Latin pharmaceutical title he will prevent, to a certain extent, the public and patient from gaining knowledge that can be of any possible good to either He referred to an epitome of the United States Pharmacopeia and National Formulary which is about to be published by the American Medical Association and which he believes will be of great advantage to all.

Believing that it would be interesting to know what percentage of proprietary remedies are used, and also the percentage of physicians using them, he collected statistics from a number of pharmacies in Baltimore, each pharmacist being requested to go over 500 prescriptions written consecutively The result is as follows

NORTH BALTIMORE.

Prescriptions examined 500
Physicians prescribing same 144
Proprietary preparations prescribed, 160 or 32 per cent.
Physicians prescribing proprietaries 29 or 20 13 per cent

EAST BALTIMORE.

Prescriptions examined 500
Physicians prescribing same not stated.
Proprietary preparations prescribed 230 or 46 per cent.
Physicians prescribing proprietaries 53 (can not compute)

SOUTH BALTIMORE

Prescriptions examined 500
Physicians prescribing same 75
Proprietary preparations prescribed 241 or 48 2 per cent
Physicians prescribing proprietaries 48 or 57 33 per cent

CENTRAL BALTIMORE.

Prescriptions examined 500
Physicians prescribing same 115
Proprietary preparations prescribed 106 or 21 2 per cent
Physicians prescribing proprietaries 50 or 43 47 per cent

ANOTHER PHARMACIST CENTRALLY LOCATED

Prescriptions examined 500
Physicians prescribing same, 180
Proprietary preparations prescribed 56 or 11 2 per cent
Physicians prescribing proprietaries 41 or 22 77 per cent

WEST BALTIMORE.

Prescriptions examined 500
Physicians prescribing same not mentioned
Proprietary preparations prescribed 153 or 30 6 per cent
Physicians prescribing proprietaries 75 (can not compute per cent)

DR S K BOND, Baltimore said that although he does not, as a rule, use proprietaries, he is occasionally compelled to do so He suggested more frequent revision of the National Formulary and the advisability of numbering its preparations so that patients would not be given an opportunity to read prescriptions

DR CHARLES CASPAR, Baltimore, presented a number of preparations described by the National Formulary which corresponded to certain proprietaries, and directed attention to their physical characteristics He said that these preparations can be prepared equally well, chemically and physically, in any pharmacy

DR. A D MCCONACHIE, Baltimore, said that the ignorance which is responsible for the use of many proprietaries should be overcome by a more thorough knowledge of prescription writing

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PHILADELPHIA COUNTY MEDICAL SOCIETY

Regular Meeting, held Jan 9, 1907

The President, Dr Charles K Mills, in the Chair

Roentgen Diagnosis in Gastric and Intestinal Disease

DR HENRY HULST, Grand Rapids, Mich., stated that the tendency in Roentgen ray diagnosis has been away from the screen and toward the plate Both methods, however, have their advantages, the screen for general orientation and motion, the plate for detail and permanent record Bismuth is needed, but the aim should be to use no more than suffices for the purposes of the examination Position exerts a marked influence on the location of the stomach and intestines The greater the ptosis the more pronounced the effect. The diaphragm is notably higher on the side on which the person examined lies and diaphragmatic breathing is greatly in excess to the other side The horizontal position permits the heart, diaphragm, stomach and colon to ascend, and causes the stomach also to gravitate towards the fundus This position tends to replace the prolapsed stomach Examination for gastroptosis in the recumbent dorsal position is therefore misleading To bring out the existing ptosis it is necessary to put the patient in the erect (sitting or standing) position Pressure against the hypogastrium pushes the stomach upward, to a less extent, the diaphragm and heart also Voluntary retraction of the lower abdomen produces a like result and is attended, moreover, by a reflex enlargement of the lower thoracic aperture This is the exact reverse of what takes place in enteroptosis in which the diaphragm descends together with the other organs, and the lower thoracic aperture diminishes in size

This suggests the existence of a definite relation between the shape of the body and the position of the int[illegible]ars. The Becker Lenhoff index is but one [illegible] of

this relation In proportion as people are well built their stomachs approach a certain type Dr Hulst asserts that good figures are rare, especially among women, and that normal stomachs must, therefore, be rare also The more of a Venus a woman, the more of an Apollo a man, the more perfectly their stomachs correspond with the normal type, but, the author feels that the line is instinctively drawn at enteroptotic Venuses and gastroptotic Apollos

Use of Roentgen Rays in Diagnosis

DR E W CALDWELL, New York City, stated that all Roentgen ray examinations are made by means of shadows which are obtained by interposing the object examined between a source of rays and a fluorescent screen or a photographic plate Dr Hickey's definition of a skiagraph was quoted as "a record of density, produced by the Roentgen rays, and made in accord with the laws of projection" No one can be safely trusted to interpret a skiagraph until he has learned to regard it, not as a view, but as a projection, and to be constantly on his guard against erroneous impressions of perspective This tendency to consider the skiagraph or so called *x* ray photograph as a photographic view has led to much of the dissatisfaction with the Roentgen ray, and sometimes caused its veracity to be called in question The Roentgen ray, it is claimed, does not lie, but one who incorrectly interprets its shadows may seem to be lying when he is only mistaken Considering the skiagraph as a projection and not as a view, the absurdity of the requests for side views of shoulders and hip joints, familiar to every Roentgen ray worker, is apparent Transverse projections of these parts superimpose the shadows of both sides as well as everything between, and the rays must pass through the body in its long diameter Such projections are, therefore, in most cases, useless

With all their imperfections Dr Caldwell regards stereoscopic Roentgen projections as extremely valuable in many cases, and, in spite of the difficulty of technic, he feels that they must come into more general use Since in Roentgen work nothing is gained by the print, he thinks it better to use the glass plate and avoid the loss of detail incident to the transfer to printing paper Whether plate or print is used, it must be remembered that the shadows of similar objects are similar in color Reference was made to the skiagraph of a supposed vesical calculus, the shadow of which, however, was dark and due to gas trapped in the rectum

DR CHARLES LESTER LEONARD said that the practitioner should demand the employment of the Roentgen method of diagnosis by a Roentgenologist whose ability and experience fit him to make diagnoses by its aid, which the practitioner himself can not make Anatomy, viewed from the Roentgenogram, is entirely different in its expression from any other view *Pathological anatomy is likewise very different and its* interpretation demands an experience and study that can only be secured by those devoting time to it

DR MIHRAN K. KASSABIAN said that the Roentgen ray is the only means of differentiating rare, obscure and simulating conditions, such as fractures, epiphyseal separations and displacements from dislocations

Roentgen Rays in Dermatology

DR RUSSELL H BOGGS, Pittsburg, made a plea for a more conservative use of the Roentgen rays in dermatology In order to apply the rays successfully he said the operator must be able to decide whether Roentgen treatment is the best method available and then be able to give the dosage necessary to produce the desired physiologic action He suggests that if every operator would first learn the action of the rays by making radiographs of the more difficult portions of the body, results would be more uniform As the rays are only indicated in certain lesions, and should not be employed in a routine manner each case should be carefully studied and then the method of treatment decided on. In the treatment of chronic eczema stubborn cases of acne, psoriasis, keloid and lupus vulgaris Dr Boggs has found the Roentgen method efficient As an epilatory agent the method is superior to any other in the treatment of parasitic diseases, such as favus and tinea, sycosis and blepharitis Considering the large amount of ringworm and favus among school children in the poorer districts and the failure of prophylactic measures to prevent their spread, it seems to the author almost imperative that these cases should have *x* ray treatment by an experienced operator The danger is pointed out of having the rays applied by resident physicians, nurses or engineers

Radiotherapy in the Treatment of Malignancy

DR GEORGE C JOHNSTON, Pittsburg, considers malignancy in the abstract as a condition of cell anarchy, expressing thereby the total disregard of the individual cells for physiological law This disregard is shown by the invasion of new territory and by remarkable multiplication These new cell formations possess low resistance and poor reparative power, and when exposed to a dose of Roentgen ray, which in normal tissue *would produce but transitory irritation, they undergo tissue* death The author shows that in the treatment of internal growths failure frequently occurs because in spite of every device an undesirable surface effect is produced before the deepest portions of the growth have received sufficient Roentgen ray There is pointed out the constantly successful results of superficial malignant conditions in qualified hands and here the greatest value of the ray is shown in those conditions less favorable for successful surgical removal, such as epitheliomas in and about the alæ of the nose, on and about the eyelids, and about the eyes It is stated that the treatment of carcinoma in the hands of certain operators has cast much discredit on the method, hundreds of absolutely unsuitable cases having been submitted to *x* ray by inexperienced physicians While he claims it as true that many primary circumscribed carcinomas have been successfully treated by Roentgen ray alone, yet he regards the wisdom of such treatment doubtful, believing it better to combine surgery and *x* ray, submitting the patient to a series of anti operative radiations, followed by extirpation of all infected tissue, and this again followed by a series of post operative radiations The objections that have been advanced to anti operative rediations he states are theoretical only, and believes that an experienced surgeon will find no difficulty in operating on a patient who has been exposed to *x* ray

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MEDICAL SOCIETY OF THE STATE OF NEW YORK.

One Hundred and First Annual Meeting, held in Albany, Jan 28 30, 1907

(*Continued from page 632*)

Pathology of Non tuberculous Joint Infections

DR. E H NICHOLS, Boston, classified these joint affections as serous, ulcerative, joint tending to become ankylosed, joint showing tendency to formation of new bone, fungous type with overgrowth of membrane and papillomatous growth extending into cavity The majority of cases of the serous type can be cured by operation The ulcerative type calls for moderate use and an attempt to increase the circulation by massage, etc This course of treatment is also applied to the joints showing a tendency to the formation of new bone

Pneumococcus and Typhoid Infection.

DR ROSWELL PARK, Buffalo, said that joint affections occur as a purely toxic synovitis and as embolic or truly septic. Of typhoid joint affections there might be mono poly articular forms . Even the spine and temporomaxillary articulations may be affected by typhoid complications If the joint complication is due to pneumococcus it is painful, if due to typhoid it is not painful Hip involvement causes the patient to assume a peculiar position and these cases should be handled with care, as a joint already affected can be dislocated easily Typhoid joint complications are not as infrequent as is supposed The conditions in pneumonic joint complications are not very different from those in typhoid Some cases occur early with very serious complications Statistics collected by a physician in Liverpool show that of 31 patients 24 died

Symptoms and Diagnosis of Syphilitic and Gonorrheal Affections of Joints.

DR REGINALD H SAYRE, New York, thought that many syphilitic joints are taken for tuberculosis, rickets, scurvy, etc. The presence of a discharge, and a history of attacks shortly antedating the joint affection, and microscopic examination of fluid from the joint, are aids in diagnosis A cure following antisyphilitic treatment does not necessarily mean that the patient was syphilitic Gonorrheal synovitis may be primary or secondary Gonorrheal infection may affect the spine, and in such cases the antigonorrheal serum may be useful

Staphylococcus and Streptococcus Joint Infections.

DR LUCIUS HOTCHKISS, New York, said that the tendency to classify all acute joint inflammations as rheumatism is a source of danger in pyogenic infections One should not condone the error of continuing to treat with salicylic acid those acute cases which are not promptly and favorably influenced by it, and in which prompt incision and drainage is the clear indication Many of the acute pyogenic infections in their early stages have symptoms in common All are acute in onset, are accompanied by pain, increased heat, redness, joint distension and obliteration of the contour, with altered position and function The constitutional symptoms are elevation in temperature, rapid, feeble pulse, headache and sometimes delirium and coma The acute sero purulent forms of synovitis not specifically due to the streptococcus or the staphylococcus should be carefully differentiated by inquiry into the history, course, and onset, and if any doubt exists recourse should be had to aspiration and bacteriologic examination High temperature in joint infections generally, when not accounted for by complications elsewhere, should arouse a suspicion of the presence of pus and make exploratory aspiration imperative Only early recognition of the true condition in severe cases of acute septic arthritis can be of the slightest help toward averting certain disaster During the course of septicemia joints may be affected and the local disturbance be so slight as not to attract the attention of the patient and hence, in such cases, it should be the rule to examine the joints daily Though the diagnosis of acute pyogenic joint infections may often be simple, the differential diagnosis between etiologically different forms is often difficult It is not sufficient to differentiate between serous or catarrhal synovitis, but we should endeavor to ascertain the cause. In cases where a focus of septic osteomyelitis is suspected, aspiration, combined with the use of the Roentgen ray, may be necessary to solve the mystery Above all, the diagnosis to be practical in saving life and limb must be made early

Syphilitic Lesions of the Eyelids

DR FRANK J PARKER, New York, said that the appendages of the eyes may be the seat of any or all of the lesions of the different lesions of syphilis The most common are the exanthemata On the eyelids they are of rapid growth and may occur at any age and period of the infection, and while they frequently involve the entire lid they result in little destruction of tissue As a pustular eruption in congenital syphilis they are most frequent in infants It is not uncommon to find the diffuse gumma on the eyelids in the early stages of the diffuse eruption Among the rare forms of extra genital infection we find chancre of the eyelids which may easily be mistaken for lupus, epithelioma, a suppurating hordeolum or chalazion The right eye is the one most liable to infection The condition is more common in males than in females

Ocular infection may frequently be due to accidental causes A physician may become infected by the coughing of a patient during a throat examination, five such cases are reported by Fournier Infection may occur as other extra genital infections are liable to do from the use of public towels sponges, etc The chancre most frequently is located on the conjunctival surface and rapidly involves the entire lid Chancre of the eyelids is always accompanied by enlargement of the pre auricular or the submaxillary gland If treated early, and there is no destruction of tissue or deformity the prognosis is good A case of syphilitic granuloma of the lower lid was reported and another of chancre on the margin of the upper lid

Cancer, Retrospective and Prospective

DR. ROSWELL PARK, Buffalo, described the attitude of the medical profession and of the public toward the cancer question, and related the difficulties encountered in getting state help in founding the Cancer Laboratory at Buffalo, which has been in existence about eight years It is the first laboratory of the kind established After outlining the work done by investigators in other laboratories he concluded that it is evident that the advances in our knowledge of cancer made during the past two years are mainly attributable to the discovery of the transplantability of tumors in small animals, a possibility until recently denied The establishment of this laboratory has pointed the way and shown the correctness of the view that the great problem of the origin and nature of cancer can only be solved by an elaborate and well supported attack from all directions, a conclusion which has been confirmed by the various other institutions that have followed this one He exhibited a map showing the steady increase in mortality from cancer in the State of New York and an elaborate study of the city of Buffalo The map might serve as a model for similar work in other cities and should be carried on in every city having a health board or a registry of deaths He was sure that if any unprejudiced person would visit the laboratory and become acquainted with what is being done, he will feel that the work is one that the state should be proud of and that is deserving of the heartiest public support

Inflammation of Thoracic Duct

DR. HENRY P DE FOREST, New York, reported a case of inflammation of the thoracic duct The clinical history showed that there was first ptomain poisoning from eating shell fish Then aggravated symptoms followed from partaking of a cold storage fowl thereby greatly lowering the resistance in the intestinal tract, and thus permitting the ptomains, as well as the bacteria, to gain access to the system Marked leucocytosis was present, the number of whites reaching nearly 100,000 When each valve was overcome, there would be a chill and finally the abscess perforated into the jugular vein, the symptoms of septicemia developed during the last week of life Necropsy showed all the organs to be normal except the kidneys and liver A mass the size of a bologna sausage was found containing an abscess cavity large enough to admit the finger The mesenteric glands were greatly enlarged This mass was at the receptaculum chyli and the condition extended up to the jugular vein Several distinctly nodulated masses were found, all about the size of a finger Pus could be squeezed from the thoracic duct into the jugular vein

Underfeeding and Its Associated Ills

DR DUDLEY ROBERTS, Brooklyn, expressed the conviction that the cure of chronic functional ailments is usually to be found in the correction of the mental and physical hygiene of each patient All dietetic problems are essentially individual problems and must be worked out on this basis Generalized reductions in dietary standards based on the prevalent assumption that we eat too much are to be deprecated. This broad condemnation of our dietary standards is not justified by any demonstrated facts or warranted by the current high average of health and efficiency Overeating at a particular meal, either daily or occasionally are dietetic errors of a different kind In the general clamor about the danger of overeating we have lost sight of the danger of undereating After careful elimination he concludes that the only absolute criterion as to whether a patient is underfed or not is the effect of an increased diet An individual afflicted with those ills known to be due to underfeeding and who has the physical constitution suggestive of this state is entitled to the experimental test of an increased dietary From an analysis of hospital and private cases the underlying causes of habitual underfeeding are the saving of time and money, loss of appetite and complaints referred to the stomach The author considered different types of cases due to this cause, the gastric type the intestinal type, the anemic type and nervous types

Book Notices

THE EAR AND ITS DISEASES, a Text-book for Students and Physicians By S S Bishop B S, M D LL.D, Honorary President of the Faculty and Professor of Diseases of the Nose Throat and Ear in the Illinois Medical College, etc. Illustrated with 27 colored lithographs and 200 additional illustrations Cloth Pp 439 Price, $4 00 net. Philadelphia F A. Davis & Co, 1906

The author has rewritten his earlier text book in which stress was laid more on disease of the nose and throat, the 18 chapters on the ear have been increased to 36, and only the essentially related conditions of the nose and throat are touched on in four chapters Five chapters are devoted to a presentation of the anatomy of the ear, for which he has made and utilized many good preparations, although it is regrettable that the half tone reproductions are not better The many cuts borrowed from Politzer show the usual inferiority to the German originals, and the colored plate of the drum heads is still very crude and almost caricatures the exquisite *"Beleuchtungsbilder"* The colored frontispiece furnishes an admirable teaching diagram, although the right ear seems connected with the left side of the nose, and other confusing details need to be explained away About 80 of the 200 illustrations are of instruments, about 30 being noted as "the author's"

The statistical summary of 21,000 cases remains as in the work of eight years ago, and has not been supplemented by more recent data The operative results of the author or others are not cited, but he quotes many individual cases and illustrates a dozen wounds at different periods after operation His descriptions of mastoid operations corresponds with the earlier work of Schwartze and Stacke, as set forth by C R. Holmes in 1892, and he is evidently conservative as to unnecessary chiseling—his radical operation being far less radical than the simple or "modern" operation of our New York colleagues If he realized that the antrum is a part of the tympanum and called his "Stacke operation" a tympanic exenteration, omitting the overworked term radical unless to note those cases in which all mastoid structure is removed, there would be less to criticise in his presentation of mastoid evisceration It will be better to imitate his conservatism rather than to amputate almost all of the temporal bone for fear that it may become diseased When he urges that all pathologic tissue be removed and illustrates at least one case of thorough tympanomastoid exenteration, the author gives sound advice, undismayed that others may claim that they are (needlessly) more radical than he

His list of indications for operation is fairly instructive, but he himself reads between the lines in many instances, as witness several of his cases reported in his chapter on influenza mastoiditis, which were brought through without operation His excessive use of ice can not be commended, nor can counter irritation of the mastoid be approved He makes no mention of the rongeur in mastoid work and speaks only of the de Vilbiss instrument for enlarging the trephin opening to explore for brain abscess In this search for pus in the brain he generally uses the aspirating needle, as he does in the lateral sinus, it is to be hoped that it will be as utterly discarded as the gimlet for opening the mastoid The description of a sinus thrombosis operation is principally quoted from E Meier and hardly suggests much personal experience. In fact, the consideration of intracranial extensions of ear disease occupies but seven pages, and is not up to the general standard of the work. More satisfactory are the chapters on the influence of general constitutional disorders and of drugs on the ears

Throughout the work Dr Bishop claims to present his own experience and findings rather than to round out a treatise by citing the varying views of authorities, so his quotations, though numerous are far from exhaustive and not always representative. His condemnation of certain measures, like Charcot's use of quinin for the relief of Meniere's symptoms, shows that he knows the matter rather by hearsay and does not realize that Charcot strove to utilize the injurious action of large doses of quinin in order to convert into a destructive lesion one that was only irritative.

The most characteristic section of the work is still the author's inflation procedure with the air tank and his advocacy of astonishing pressures He quotes Politzer as stating the pressure for "my method varies, as a rule, between 15 and 60 pounds," also "during thirteen years only 14 cases of ruptured drum heads are known In the case of a normal membrana tympani a pressure of from 45 to 60 pounds is required to cause rupture"—assertions which can not be found in Politzer's later writings His text book (Fourth Amer Ed., 1903) gives the pressure as from 0 1 to 0 4, atmosphere (from 1 5 to 6 pounds) or more.

It is with unabated astonishment that one reads "The author has never ruptured a drum head by compressed air," and further "A case of tubal stenosis resisted 90 pounds with the nasal bulb, but 50 pounds pressure carried a spray into the middle ears through the catheter" "If more than from 15 to 30 pounds be used with the catheter beak not properly adjusted, there is a possibility of forcing the air into the submucous tissues and producing a dangerous emphysema. We have never seen any such results from this cause, but three deaths are recorded" When we remember that the cheeks and mouth can only resist a pressure of from 5 to 7 pounds, and the palate probably little more, we can understand some of the harmlessness of the inflation without the catheter, and must admire the providential safeguards that protect the middle ear from most of the stress of such dangerous pressures, which in caissons and elsewhere have been frequently known to rupture the drum head Used with only some 10 pounds of pressure, as seems usual with Dr Bishop, his procedure may be effective and safe

RECENT ADVANCES IN THE PHYSIOLOGY OF DIGESTION Delivered in the Michaelmas Term 1905 in the Physiological Department of University College, London By E H Starling M D F R S Jodrell Professor of Physiology With twelve illustrations. Cloth. Pp 156 Price $2 00 net. Chicago W T Keener & Co 1906

These lectures consist almost entirely of a popular form of discussion of the various features of digestion, in connection with the important investigations which have been carried out in the laboratory of the author at University College, and which in turn rest on, or were incited by, Pawlow's researches The most striking feature of the work of Starling's school is on the interaction between the different sections of the alimentary tract These, he demonstrates, are not regulated and incited so much by nervous mechanisms as Pawlow had believed but rather by chemical substances which are formed under the influence of the products of digestion in one part of the tract, and which are absorbed into the blood and produce a stimulation of some other portion of the tract Thus, under the influence of the acid chyme on the upper part of the small intestine, the intestinal mucosa produces a substance called "secretin," which causes a rapid secretion of pancreatic juice, and also, probably, of bile. These stimulating substances are called by Starling "harmones" (from ὁρμάω arouse or excite), a name which will probably become conspicuous in the physiologic literature of the future The hormones, as yet discovered, do not belong to the chemically complex substances like toxins and enzymes, but seem more comparable to the alkaloids and similar substances of definite composition Starling compares them to the drugs of the pharmacopeia, saying "The practice of drugging would seem therefore to be, not an unnatural device of man, but the normal method by which a number of the ordinary physiological processes of the organism are carried out"

The physician will find in this book a fairly clear and relatively brief discussion of the most recent advance in the physiology of digestion, or what Starling calls the "growing border" of the subject, and it should be of great interest for those who are concerning themselves particularly with the subjects of gastrointestinal disturbances The investigations discussed in this book are very valuable, as supplementing and checking the results obtained in Pawlow's laboratory, which have exerted such a profound influence on the modern conception of the functions of the digestive tract The style of discussion is reasonably clear, although one is impelled to ask to what sort of an audience the lectures were delivered, for in places the author spends time in presenting the simplest elementary facts about the physiology of digestion, such as should be familiar to a high school graduate, while for the most part the level of

the discussion requires a well trained mind to comprehend the full significance of the subject Many American surgeons would be delighted to question the position taken by Starling in considering the gall bladder as an organ of considerable importance as a reservoir for bile to be discharged at each meal.

PHOTOSCOPY (Skiascopy or Retinoscopy) By M. D Stevenson M.D Ophthalmic Surgeon to the Akron City Hospital etc. Illustrated Cloth. Pp 126 Price $1.25 net. Philadelphia W B Saunders Company, 1906

This is a most valuable book and one which even the most advanced ophthalmologist may read with profit The new term photoscopy which the author uses instead of the more familiar terms, retinoscopy, skiascopy, shadow test, etc, means to "look at light," and he uses this term to draw the attention of the reader to the fact that it is essentially a *light* test He considers the shadows as secondary and keeps one's attention directed toward the light area seen in the pupillary space and its rate and direction of movement under different conditions of refraction mirrors, etc. The importance of emphasizing the real value of the light area in this test can not be too strongly stated The average book tends to direct attention to the shadow, which is manifestly incorrect and leads to errors, as the shadows occupy the peripheral irregular portion of the cornea, while the light area is to be found at the center, the part through which the light rays must pass when the pupil is of normal size The shadows, however, are the more prominent in apppearance, and it requires careful concentration of one's attention on the light area to avoid being influenced by the striking shadow effects If one will only heed the author's insistence on the importance of this light area in all cases, the results will speak for themselves The matter is presented clearly and is well classified and arranged The print is large and distinct and the work abounds with practical illustrations

THE NERVOUS SYSTEM OF VERTEBRATES By J B Johnston Ph D Professor of Zoology in West Virginia University with One Hundred and Eighty Illustrations. Cloth. Pp 370 Price, $3 00 net. Philadelphia P Blakiston's Son & Co., 1906.

This work will be cordially welcomed by zoologists, anatomists and scientific neurologists It is written from a biologic rather than a medical point of view, so the average general practitioner will deem it to be somewhat outside his sphere It is based largely on original investigations by the author, published here for the first time, and it is profusely illustrated. The author accepts the neuron theory with certain modifications, admitting the occasional fusing of nerve cells with each other and the anastomosis of dendrites of different cells. He states that that part of the neuron theory which claims that nerve cells make connections with one another only by contact, is definitely disproved. As to the neurofibrillæ, he doubts the view that they constitute a special conducting substance in the nerve cell, but considers it more reasonable to regard them "as a dense portion of the colloid substances in the cytoplasm of nerve cells, whose definite form and arrangement are conditioned on the intimate structure of the protoplasm as a whole" He does not accept the "autogenetic" or "peripheral" theory of nerve regeneration advocated by Bethe, Ballance, Stewart and others, but states that the later researches of Cajal give positive evidence that the nerve is regenerated by outgrowth of the proximal stumps of the cut fibers

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances Discoveries and Improvements in Medical and Surgical Sciences. Edited by H A. Hare M D Professor of Therapeutics and Materia Medica in Jefferson Medical College assisted by H R. M Landis M D Paper Pp 340 Philadelphia Lee Bros. & Co

This volume discusses fully the literature of the subjects mentioned Dr J Dutton Steele, in his discussion of the diseases of the digestive tract and allied organs, devotes considerable space to occult bleeding as a sign of gastrointestinal disease and to the physiology and pathology of the gastric secretion Skiagraphy in the diagnosis of gastrointestinal diseases also comes in for its share of attention. This subject is something comparatively new and, therefore of more than passing interest Dr William T Belfield has charge of the department on genitourinary diseases and presents a most excellent résumé on this subject. Diseases of the kidney are considered by Dr J R. Bradford Dr J C Bloodgood discussing anesthesia, fractures, dislocations, amputations, surgery of the extremities and orthopedics, while Dr H R M Landis contributes as usual, the practical therapeutic referendum Much matter has been collected in this volume which will, no doubt, prove useful to the practical physician.

ANATOMY PHYSIOLOGY PATHOLOGY DICTIONARY Edited by W A. Evans M.S M.D A. Gehrmann M D., and W Healy A B M D Practical Medicine Series Comprising Ten Volumes on the Year's Progress in Medicine and Surgery under the editorial charge of G P Head M D Professor of Laryngology and Rhinology Chicago Post Graduate Medical School. Vol IX. Series 1906. Price $1.25 Chicago The Year Book Publishers

This volume reviews the advances of the year in anatomy, physiology and bacteriology The abstracts are short, as a rule, and comprise the practical results arrived at by various authors Pathology is made to include much that seems to fall properly under the head of clinical laboratory methods A somewhat unique feature of the book is the dictionary of new words which shows in a striking manner the impress that medical progress is making on language Over a hundred new words and phrases are explained in this section. The volume sustains the reputation of the series for conciseness, accuracy and practical value to the physician

OPERATIVE TREATMENT OF PROLAPSE AND RETROVERSION OF THE UTERUS By J I Parsons M.D M.R.C.P M.R.C.S Physician to the Chelsea Hospital for Women Late Surgeon Royal Maternity Charity, Fellow of Royal Medical and Chirurgical Society Obstetrical Society of London Cloth Pp 90 Price $1 25 net London John Bale Sons and Danielson Ltd. New York William Wood & Co

This monograph gives the results of the author's experience in twenty years' work in a special hospital for women Parsons takes up first the anatomy and physiology of the pelvis and the organs contained therein, the general causes of displacement, and the treatment In prolapse, he injects into the broad ligament a solution of quinin, gr xii, sulphuric acid dil, m xxx, and distilled water, ℥i, in order to produce adhesions by the ensuing inflammation and effusion of lymph After injecting the solution the uterus is placed in anteflexion and kept in that position by a pessary He claims for this operation that there is no pain afterward, no loss of blood, no shock, and no interference with subsequent pregnancy The technic for this and for other operations is illustrated

LECTURES ON MIDWIFERY FOR MIDWIVES By A B Calder M B M.R.C.S Lecturer on Midwifery to London County Council, to St. Mary's Midwifery Training School Fulham etc. Cloth. Pp 274. Price $2.00 net. New York William Wood & Co

This book consists of lectures to classes in midwifery It considers briefly the anatomy and physiology of the pelvis and pelvic organs, the mechanism and management of labor, infant feeding, abnormal conditions affecting the mother or child, and the hygiene of the lying in chamber The book concludes with chapters on the midwives' act and the rules of the central midwives' board of Great Britain It is a little too comprehensive for nurses and hardly complete enough for use as a text book for medical students

SKIN AND VENEREAL DISEASES NERVOUS AND MENTAL DISEASES Edited by W L. Baum M D H T Patrick M D and W Healy A B M D Practical Medicine Series Comprising Ten Volumes of the Year's Progress in Medicine and Surgery under the general editorial charge of G P Head M D Professor of Laryngology and Rhinology Chicago Post-Graduate Medical School Volume V Series 1906 Cloth, Pp. 254 Price $1 25 Chicago The Year Book Publishers.

This volume is the last of the series of ten issued in 1906 It gives a good résumé of the advances made within the past year in the subjects with which it deals The book is carefully edited and written with the evident idea in view of being of value to the general practitioner The arrangement of the work and a number of good illustrations serve to make it a practical and useful volume

THE HARVEY LECTURES Delivered Under the Auspices of the Harvey Society of New York 1905-06 By Prof H Meyer Prof C von Noorden and others Cloth Pp 327 Philadelphia J B Lippincott Company 1906

This volume contains the thirt[illegible] the first course of the Harvey Society [illegible]ures have appeared in THE JOURNAL [illegible] in delivery

Medical Education and State Boards of Registration

COMING EXAMINATIONS

MAINE Board of Registration in Medicine Common Council Room, Portland, March 5 Secretary, Dr W J Maybury Saco

MASSACHUSETTS Board of Registration in Medicine Room 15, State House Boston March 12 13 Secretary, Dr Edwin B Harvey, Room 159 State House, Boston

CONNECTICUT Medical Examining Board (Regular), City Hall, New Haven, March 12 13 Secretary, Dr Charles A. Tuttle, New Haven.

CONNECTICUT Eclectic Medical Examining Committee, State Capitol Building, Hartford, March 12 Secretary, Dr George A. Faber, Waterbury

CONNECTICUT Homeopathic Medical Examining Committee New Haven March 12 Secretary Dr Edwin C M Hall New Haven.

IOWA Board of Medical Examiners Des Moines, March 19 21 Secretary, Dr Louis A. Thomas Des Moines.

OKLAHOMA Board of Medical Examiners, Guthrie, March 26 27 Secretary, Dr J W Baker, Enid

Maryland December Report.—Dr J McP Scott, secretary of the Board of Medical Examiners of Maryland, reports the written examination held at Baltimore, Dec 12 15, 1906 The number of subjects examined in was 9, percentage required to pass, 75 Of the 63 applicants who were present, 26 participated in the examination for the first time, and of these 20 were successful. Thirty four applied for re examination in branches in which they had previously failed, of these 15 were successful, working off all branches Primary examinations require a general average of 75 per cent Those re examined are required to make 75 in each branch Three took the examination for second year students and have completed studies in anatomy, chemistry, materia medica and physiology The following colleges were represented

PASSED

College	Year Grad	Per Cent.
Howard University	(1906)	75, 80
Georgetown University	(1904)*	
George Washington University	(1905) 81 (1906) 75 80	83
Maryland Med. Coll (1904)*, (1905) 79 (1905)* (1906)*		
University of Maryland, (1902)* (2 1904)* (2, 1905)*, (1905) 83 (2 1906)*	(1906) 75	80
Baltimore Med Coll (1904) 75 (1906) 89 (2 1906)*		
Coll of P and S Baltimore, (1902)*, (1903) 84	(1906) 88	88
Leonard School of Med Raleigh N C	(1905)	83
University of Pennsylvania (1894)*	(1906)	79
Johns Hopkins Med. School, (1903) 86 (1905) 85	(1906)	87

FAILED

George Washington University	(1906)	70
Maryland Med. Coll (1904)* (2 1905)* (1906) 59	64, (3 1906)*	
Baltimore Med Coll (1905)*, (1906) 69 (2 1906)*		
University of Maryland (1905)*, (1906) 73 (2, 1906)*		
College of P and S Baltimore (1904)* (1906)*		
Baltimore University (1902)* (2 1903)*		
Leonard School of Med. Raleigh N C	(1905)	68
Jefferson Med Coll	(1906)*	
University of the South	(1904)*	

* Re-examined no percentage assigned.

† One candidate was dismissed from examination for cheating

The following questions were asked

ANATOMY

1 Give origin insertion and nerve supply of the following muscles Biceps (flexor cubiti) pterygoids, sartorius gastrocnemius 2 Name and give location of the ductless glands 3 Name cavities of the heart and describe the valves 4 Superficial and deep origin course and distribution of the facial nerve. 5 What structures pass (a) through the jugular foramen (b) through the foramen magnum? 6 Describe the hip joint.

SURGERY

1 Describe the treatment of fracture of the patella 2 Describe the fractures commonly designated (a) Pott s fracture, (b) Colles fracture. Give treatment of each 3 Tetanus Give its cause diagnosis treatment and modes of prevention 4 Otitis media Define classify and give cause symptoms and treatment 5 Acute glaucoma Define describe and give cause and treatment 6 Describe amputation at middle third of forearm naming important structures severed.

PATHOLOGY

1 Name and describe the organisms most frequently associated with the following disease Typhoid fever malarial fever (estivo-autumnal type) tuberculosis Give method of staining of each 2. Describe in their order and explain the cardinal signs of inflammation and state the terminations of inflammation 3 State the difference in the gross pathology of acute lobar and bronchopneumonia and name the organism most frequently associated with each 4 Give the avenues of entrance and elimination of the specific organism of typhoid fever Name what you consider the most characteristic anatomic lesion and describe in detail the microscopic method of obtaining the Widal reaction 5 Give the gross pathologic anatomy of cerebral apoplexy 6 Explain what is meant by the terms physiologic and pathologic leucocytosis respectively State whether a leucocytosis is present in the following diseases Typhoid fever malarial fever appendicitis acute miliary tuberculosis.

GYNECOLOGY AND OBSTETRICS

1 Describe the care of the new born child and how you would nourish it the first two or three days there being an absence of the mother s milk 2. Name several conditions of the mother that unfit her to nourish the infant 3 Give the various dimensions of the pelvis and describe what presentations are best adapted to them 4 What indications require the use of the forceps Give your method of using them and the danger of their use to mother and child. 5 Describe the mechanism of a breech presentation and how would you dispose of the cord during the expulsion of the child. 6 Describe the method of delivering a face or frontal presentation.

PRACTICE.

1 Define (a) Pertussis, (b) pleurodynia, (c) herpes zoster, (d) pyonephrosis, (e) cholelithiasis 2 Name symptoms of (a) variola (b) acute colitis (c) locomotor ataxia. 3 Differentiate between sero-fibrinous pleurisy, lobar pneumonia and tubercular consolidation of the lung 4 By what symptoms could you arrive at the earliest positive diagnosis of typhoid fever? 5 Treatment of (a) chorea (b) ulcerative stomatitis. 6 Give diagnosis and treatment of early stage of pulmonary tuberculosis.

CHEMISTRY

1 Define the terms "normal salts," 'acid salts' "basic salts Give the chemical composition of physiologic 'normal salt solution with the approximate amounts of each ingredient. 2 Give the formula for the general properties of and the usual source in nature of carbon monoxid and carbon dioxid respectively If inhaled describe how they act chemically as poisons 3 Give the chemical composition (formula) and general properties of plaster of Paris Explain in detail the process of setting of plaster 4 Give the general properties of and name the antidote for carbolic acid (C_6H_6O) Construct its graphic formula and show what relation it bears to benzene (C_6H_6) 5 Name the chief chemical constituents of gallstones and give in detail a test for the detection of bile in the urine. 6 Give in detail a test for the detection of lactic acid in a specimen of gastric contents

MATERIA MEDICA

1 Give the chemical name of Epsom salts Rochelle salts, glauber salts. 2 Mention the ingredients and give the dose of pulvis glycyrrhizæ compositus. 3 Give the composition dose and pharmaceutical name of Basham s mixture 4 Name three drugs belonging to each of the following classes (a) Narcotics (b) diaphoretics (c) ecbolics 5 What is the antidote for arsenic and how is it prepared? 6 Give the derivation of opium What amount of (a) powdered opium (b) tincture opium (c) camphorated tincture of opium would equal in effect one-fourth grain morphin sulphate?

THERAPEUTICS

1 Define therapeutic incompatibility chemical incompatibility and give illustrations of each 2 Describe hypodermoclysis and the conditions in which it is practiced as a therapeutic means 3 Write a compound prescription for an adult suffering from insomnia 4 Write a prescription containing at least two drugs, for an adult suffering from acute articular rheumatism 5 Mention three drugs to accelerate the action of the heart and give the dose of some official preparation of each 6 Name three drugs used to retard the action of the heart and give the dose of some official preparation of each

PHYSIOLOGY

1 Define secretion and excretion What organs of the body are purely excretory? 2 What disturbances of digestion result from and absence of bile? 3 Enumerate the functions of the cerebellum 4 Name the fluids of the alimentary canal Where is the succus entericus formed? 5 How many kinds of muscular tissue are found in the body? Describe each 6 Describe the main forms of intestinal movement and give some of the conditions that would affect such movement.

Maryland Reciprocity Report.—Dr J McP Scott, secretary of the Board of Medical Examiners of Maryland sends us a report of physicians licensed through reciprocity during the year 1906 The following colleges were represented

College	Year Grad	Reciprocity with
George Washington University	(1905)	Dist. Colum
Georgetown University	(1897)	Dist. Colum
Georgetown University	(1901)	Delaware
National University Washington, D C*	(1902)	Dist. Colum.
University of Maryland	(1881)**	
Baltimore Med Coll.	(1901)	Virginia
Maryland Med Coll	(1903)	Vermont
University of Minnesota	(1897)	Dist. Colum
Cleveland Homeo Med Coll	(1873)	Ohio

* Merged with Medical Department of Columbia University in 1903

** Applicant was granted a permit to register by virtue of practice in Maryland prior to 1892

Increased Entrance Requirements.—The faculties of the Department of Medicine of the University of North Carolina and of the College of Medicine of the State University of Oklahoma announce that after January 1 1910, they will require, in addition to a four year high school education, a preliminary year to be devoted to physics, chemistry, biology and languages

Indiana October Report.—Dr W T Gott secretary of the Board of Medical Registration and Examination, reports the written examination held at Indianapolis, Oct 23 25 1906 The number of subjects examined in was 16 The total number of candidates examined was 73, of whom 67 passed (including 2 osteopaths), and 6 failed The following colleges were represented

PASSED

College.	Year of Grad.	Anat., Including Hist. and Embr		Pathology and Bacteriology		Physiology		Etiology and Hygiene.	Medicine.	Mat. Med. and Therapeutics.	Gynecology	Physical Diagnosis.	Ophthalmology and Otology	Surgery		Chemistry		Medical Jurisprudence		Neurology	Laryngology and Rhinology	Obstetrics	Pediatrics.	Total Points.
George Washington University	1906	92		90	60	48		89 6	90.5	55	45	28	100	50		18	30	20		84	15	915 1
College of P & S Chicago	1906	85		85	55	42		87	87 4	40	48	18	90	50		20	27	17		84	18	853.4
College of P & S, Chicago	1906	79		95	65	50		83 8	81 8	56	42	27	95	40		20	30	20		86	19	889 6
College of P & S, Chicago	1906	75		85	55	38		76 4	78 5	52	42	29	100	50		18	30	20		76	18	842.9
College of P & S, Chicago	1906	88		100	61	50		91 5	95	52	45	26	100	50		20	30	20		87	20	935 5
College of P & S Chicago	1906	89		88	62	48		86 9	83 2	52	44	28	90	50		18	30	20		75	8	872.1
College of P & S, Chicago	1906	87		85	61	45		87	88	48	45	26	100	50		20	30	20		84	17	803
College of P & S Chicago	1906	75		90	55	42		84 1	85 7	50	40	21	95	40		18	30	20		81	19	845 8
College of P & S, Chicago	1905	81		100	60	46		89 8	94 5	52	40	24	90	40		20	30	20		76	14	877 3
College of P & S, Chicago	1905	62		50	58	48		65	74 8	55	42	22	80	35		18	23	20		85	17	754 8
College of P & S Chicago	1903	76		80	60	48		82.	83 5	48	42	25	95	50		20	28	18		82	17	854 5
College of P & S Chicago	1901	75		90	55	30		86 6	90	50	45	26	100	50		20	30	15		87	17	866.6
Chicago Homeo Med. Coll	1903	81		90	61	48		85	96	48	42	26	100	50		20	30	17		90	20	910
Rush Medical College	1906	83		98	65	50		90 5	92.5	56	42	20	95	50		18	25	17		90	16	917
Rush Medical College	1905	88		92	60	50		83 5	83 5	52	44	28	100	50		18	27	20		75	14	885
Rush Medical College	1906	77		85	54	45		88 3	90	58	45	28	100	50		18	30	20		84	18	890 3
Rush Medical College	1906	90		98	62	50		86	94	52	44	28	100	50		20	30	20		75	17	916
Rush Medical College	1905	79		80	59	48		88 1	86 4	50	42	28	100	50		20	26	20		92	18	886 5
Rush Medical College	1902	89		95	55	50		95	92 9	52	44	27	100	50		20	30	20		86	14	919 9
American College of Med. & Surg	1905	88		88	58	50		94	95	56	46	30	100	50		20	30	20		87	20	932
Illinois Medical College	1906	81		95	63	40		85 6	84 4	45	40	20	95	50		20	30	20		90	18	883
Illinois Medical College	1906	90		86	65	48		89 5	90	48	45	28	95	50		20	28	18		91	19	910 5
Illinois Medical College	1905	76		88	54	45		76 9	85 7	45	42	20	95	50		20	27	20		85	18	847 6
Hahnemann Medical College, Chicago	1896	73		75	42	40		84	90	52	49	25	88	40		18	26	15		85	19	821
Hahnemann Medical College, Chicago	1893	60		80	24	48		81	84	45	44	28	80	50		20	30	20		95	15	804
Northwestern University	1906	78		92	60	38		86 5	87 8	50	45	24	85	45		20	30	18		75	20	844 3
Northwestern University	1906	89		95	65	50		91 5	92 5	50	60	28	90	50		20	30	20		87	17	935
Northwestern University	1905	91		100	67	50		95	93	59	48	30	100	50		20	30	20		89	18	960
Indiana Medical College	1906	92		95	66	50		84 5	88 8	48	45	25	100	50		20	30	20		87	17	918 3
Indiana Medical College	1900	92		90	57	43		87	88 3	50	45	27	100	50		20	28	20		87	14	898 3
Indiana Medical College	1906	75		70	41	48		77	76 5	48	45	28	100	50		20	30	20		79	18	825 5
Medical College of Indiana	1894	68		80	59	50		84 8	86 9	48	46	28	95	38		18	28	20		85	15	849 7
Ft. Wayne College of Medicine	1905	75		98	58	48		85 3	89	55	40	27	100	50		20	30	20		95	17	907 3
Hospital College of Medicine, Louisville	1900	76		45	59	42		83	81	40	38	22	85	50		15	27	18		69	9	759
Hospital College of Medicine, Louisville	1906	77		95	56	48		85 1	82 3	50	46	28	100	50		20	30	18		81	18	884 4
Hospital College of Medicine, Louisville	1906	78		95	57	50		77 4	79	48	42	26	100	50		20	30	20		77	18	807 4
Hospital College of Medicine Louisville	1906	73		70	25	30		76	81 7	46	42	28	80	40		18	27	20		80	13	755 7
Hospital College of Medicine Louisville	1906	90		95	65	48		85 7	82 5	52	44	30	100	50		18	30	18		77	18	903 2
Hospital College of Medicine Louisville	1906	63		80	58	46		77 3	76	35	30	22	90	40		15	27	18		64	10	751 3
University of Kentucky	1900	91		80	57	38		85 3	96 6	42	38	23	80	50		20	25	17		77	14	823 9
University of Kentucky	1906	90		90	48	40		83 1	85 4	48	40	27	95	38		20	25	15		77	10	835 5
Kentucky School of Medicine	1906	76		70	51	44		79 1	81 8	46	40	23	100	45		18	26	20		88	14	821 9
Kentucky School of Medicine	1906	72		75	57	35		76 9	82 2	45	38	22	85	45		15	30	18		83	19	798 1
Kentucky School of Medicine	1906	70		65	57	40		75 7	75 5	55	38	29	95	40		18	30	20		83	18	815 2
Kentucky School of Medicine	1897	95		90	58	50		94 5	92 9	50	42	28	100	45		20	30	20		100	17	932 4
University of Louisville	1906	82		82	63	45		86 3	87	50	42	28	95	50		20	30	15		82	13	870 3
University of Louisville	1905	78		65	38	45		78 8	81 6	50	35	26	90	50		18	25	20		77	8	785 4
Louisville Medical College	1906	80		85	60	45		86 5	85 8	45	42	28	100	50		18	27	20		88	10	870 3
Louisville Medical College	1900	75		60	53	40		75 6	82 5	50	42	26	85	48		20	26	17		84	13	797 4
Louisville Medical College	1906	90		90	62	50		86	86	52	45	26	95	50		20	30	20		91	10	912
Louisville Medical College	1906	81		100	60	50		84	91 8	58	48	28	95	50		20	30	15		82	18	910 8
Louisville Medical College	1900	81		60	58	40		77 4	79	50	35	24	95	45		20	18	18		75	18	793 4
Louisville Medical College	1900	79		88	57	50		82 9	85	45	40	24	95	50		18	30	18		83	18	802 9
Baltimore Medical College	1900	85		88	58	50		80	82 9	55	45	30	100	45		18	23	20		75	18	876 9
University of Maryland	1906	75		40	30	30		82 5	86 3	60	50	30	100	45		18	25	20		85	18	794 8
Harvard Medical School	1899	92		85	65	50		88 2	89	58	45	30	90	40		20	30	20		88	18	908 2
University of Michigan	1906	87		100	61	50		85 8	89 4	58	46	28	100	48		20	25	20		83	19	820 2
St. Louis University	1906	88		65	53	50		86 8	83 8	50	40	22	90	50		20	30	18		62	12	820 6
Columbia University	1900	35		85	58	46		84 4	84 9	37	40	23	100	50		18	30	20		91	13	816 3
Cornell University	1904	92		90	67	46		89	89 8	50	42	26	100	50		20	27	20		83	17	908 8
Medical College of Ohio	1903	91		90	61	50		85 2	87 8	45	44	28	100	40		20	30	15		85	13	883
Miami Medical College	1900	75		98	58	50		78 2	78	52	48	29	95	45		20	30	20		81	16	873 2
Eclectic Medical Institute, Cincinnati	1906	78		80	58	50		98	95	56	45	28	95	45		20	30	18		84	20	900
Medico Chirurgical College Philadelphia	1906	89		94	65	50		90	87 8	58	45	28	100	45		20	30	20		94	13	928 8
University of Pennsylvania	1899	91		100	65	50		91	90	52	42	26	100	50		20	26	20		79	18	920

FAILED

Illinois Medical College	1906	50	65	20	37 5	74	74	58	45	20	100	47	15	20		20	14	748 5
Indiana Medical College	1900		30		10	74 1	74 7	30	38	20	27	20	10	15		8	1	2		370 8
Medical College of Indiana	1904	68	20	18	40	67 8	70 9	40	38	22	90	28	18	20		20	12	17		677 7
Indiana Medical College	1900	64	30	38	42	75 6	77 1	36	40	24	100	50	20	30		20	20	9		731 7
Eclectic Medical College of Indiana	1906	25	5	57	5	50	60	25	20	22	90	30	20	25		17	71	8		550
Eclectic Medical Institute Cincinnati	1906	47	40	25	15	80	80	30	38	20	75	15	20	26		15	71	10		607

An International Association of Medical Museums.—It is now well recognized that a medical museum having its specimens properly catalogued and classified that they may be readily found and used when needed is an important adjunct to the teaching facilities of the medical college It is therefore interesting to know that a movement has been started with every prospect of success to organize an International Association of Medical Museums Dr James Carroll curator of the Army Medical Museum, is the chairman of the committee on organization and the meeting will be held in May at Washington The object of such organization is given as follows

a The promotion in a general way of the efficiency of the medical museum as a compendium of scientific facts a storehouse of material for research work and as a medium for teaching

b Stimulation of the study and increase of the knowledge of gross pathology

c Discussion of plans of cataloguing and classification and methods for the preparation and preservation of specimen

d Arrangements for the exchange of specimens and for the specialization of certain museums along particular lines in which they may enjoy the best facilities provided this can be done without detriment to the interests of any of the museums concerned

e Consideration of the feasibility of publishing an *Index Pathologicus* in the future

Thirty three museums have already applied for active membership Further particulars may be had from Dr Carroll

Utah January Report.—Dr. R. W. Fisher, secretary of the Utah Board of Medical Examiners, reports the written examination held at Salt Lake City, Jan. 7-8, 1907. The number of subjects examined in was 8, percentage required to pass, 75. The total number of candidates examined was 10, all of whom passed. The following colleges were represented:

PASSED

College	Year of graduation	Anatomy	Surgery	Bact., Hist. and Med. Juris.	Physiology and Hygiene	Chemistry	Mat. Medica	Obstet. and Gynecology	Pract. of Pediat. and Pathology	General Average
Denver & Gross Coll. of M.	1900	85	83	81	87	85	80	85	82	83.5
Denver & Gross Coll. of M.	1905	92	90	84	91	75	75	80	84	85
Denver & Gross Coll. of M.	1892				75	75				75
Colorado School of Med.	1904	87	87	89	90	75	85	80	80	84.2
Rush Med. Coll.	1906	88	89	77	79	85	85	87	87	84.6
Rush Med. Coll.	1904	90	81	81	82	85	85	85	92	85.1
Northwestern University	1906	95	94	96	98	85	80	98	86	91.5
Univ. Med. Coll. Kansas City	1904	90	82		80	80	85	88	85	73.7
Creighton Med. Coll.	1906	88	81	75	85	75	75	80	85	81.3
Laval University, Quebec	1901	81	83	76	75	60	80	80	75	76.2

Minnesota January Report.—Dr. W. S. Fullerton, secretary of the Minnesota State Board of Medical Examiners, reports the written examination held at St. Paul, Jan. 2-4, 1907. The number of subjects examined in was 15, total number of questions asked, 90, percentage required to pass, 75. The total number of candidates examined was 13, of whom 4 passed and 9 failed. Seven reciprocal licenses were granted at this examination. The following colleges were represented:

PASSED

College.	Year of Graduation	Medicine.	Surgery	Obst. and Gyn.	Materia Med.	Anat. and Hist.	Physiology	Chem. Toxicol and Urinalysis	Pathology and Bacteriology	Prev. Med. and Medical Juris.	General Average.
Coll. of P. & S. Keokuk	1889	81	78	78	80	95	87	83	63	74	79.8
University of Minnesota	1905	79	65	91	65	78	85	75	76	74	76.4
Albany Med. Coll.	1900	90	73	80	66	96	86	88	75	78	81.3
Coll. of P. & S. New York.	1902	92	89	78	75	89	93	80	79	80	83.8

FAILED

Ft. Wayne Coll. of Med.	1905	69	55	75	65	64	75	66	57	75	66.7
Coll. of P. & S., Chicago	1906	76	58	84	42	36	75	75	68	72	65.1
Sioux City Coll. of Med.	1902	73			33		45				50.1
Minneap. Coll. of P. & S.	1904	70	39	78	53	58	75	67	47	79	62.8
Minneap. Coll. of P. & S.	1906	75	23	86	45	66	75	67	62	72	62.3
Minneap. Coll. of P. & S.	1906	76	40	88	57	68	75	85	63	73	69.4
Minneap. Coll. of P. & S.	1906	78	43	78	68	90	80	80	68	72	73
Ecl. Med. Inst., Cincinnati	1899	58	32	73	75	23	70	20	19	69	48.7
University of Virginia	1906	83	67	63	67	86	82	75	77	78	75.3

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with.
Rush Med. Coll. (1904)	(1905)	Illinois
College of P. and S., Chicago	(1906)	Illinois
Chicago Med. Coll.	(1883)	Wisconsin
University of Michigan	(1902)	S. Dakota
Creighton Med. Coll.	(1906)	Nebraska
Royal University, Norway	(1892)	Wisconsin

Rhode Island January Report.—Dr. Gardner T. Swarts, secretary of the Rhode Island State Board of Health, reports the written examination held at Providence, Jan. 3-4, 1907. The number of subjects examined in was 7, total number of questions asked, 70, percentage required to pass, 75. The total number of candidates examined was 17, of whom 10 passed and 7 failed. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Baltimore University	(1906)	75
Johns Hopkins Med. School	(1899)	92.8
Harvard University (1901) 77.9 (1904) 88.6	(1907)	75*
Long Island Coll. Hosp.	(1905)	79.4
University and Bellevue Hosp. Med. Coll.	(1901)	80.6
University of Pennsylvania	(1892)	82.2
University of Vermont	(1905)	78.8
Soc. Apoth., London**	(1892)	85

FAILED

Baltimore University	(1904)	65.1
Maryland Med. Coll.	(1906)	68.2
Laval University, Quebec (1904) 63.6	(1905) 68.	66.1
Nongraduates	48.5	58.1

* Passed all examinations and will receive degree at next commencement.

** A licensing body not a medical school.

Discussions

VALUE OF MIOTICS IN GLAUCOMA

(*Continued from page 680*)

DISCUSSION

DR. JOHN E. WEEKS, New York, said that miotics are frequently used in a desultory way, but that much better results may be obtained if their use is persisted in as advised by Dr. Posey. The treatment becomes very monotonous and is neglected by the patient, who drifts from observation and permits the disease to advance. Dr. Weeks said that he is in accord with Dr. Posey in the belief that treatment with miotics should be attempted in suitable cases of chronic glaucoma, and should be used so long as the patient is benefited. If for any reason the treatment can not be satisfactorily carried out, or if, on subsequent examinations, there is a diminution of the field for form or color, he would urge iridectomy. There are some cases beginning late in life in which the few remaining years of life can be bridged over by employing miotics. After iridectomy he uses miotics regularly in all cases in which there is any evidence of glaucoma, employing pilocarpin principally. The objections to operations, as mentioned by Dr. Posey, he does not think amount to much if the operator is skilful. The optical disadvantages are of little importance. Cataract before or after iridectomy in glaucoma is not uncommon. Infection after iridectomy is, of course, possible, but should be the rarest of accidents. Cases without congestion are favorable for the employment of miotics, but iridectomy is the procedure that promises most in all congestive cases. Dr. Weeks said that his experience with miotics prior to iridectomy has not been very encouraging. In one of his most satisfactory cases vision was retained for three years. In January, 1903, examination showed R. E., glaucomatous cupping, 1 mm., T. Anterior chamber shallow. V.=20/20 with correction, field for form very slightly contracted above and to the nasal side, fields for color slightly contracted in the same quadrant. Pupil of normal size. L. E., glaucomatous cupping, 1.33 mm. Pupil oval, dilated. T. +2. Anterior chamber shallow. V.=⅛.

May 4, 1906.—R. E., V. = 20/20— Field for form almost normal in extent. Fields for colors much reduced. T. +. Dr. Weeks advised iridectomy, which was performed May 9. The prospects for retention of vision are very good at the present time. In this case good central vision was retained in the better eye. If a similar case presents he will advise iridectomy earlier. In a case of similar nature the left eye had become blind from glaucoma and there was glaucomatous cupping, slight pus tension and some limitation of the nasal half of the field of vision of the right eye. The patient, a woman, wished to avoid operation, and Dr. Weeks advised pilocarpin solution, but after seven months of treatment, irregular during the last eight weeks, she was found on examination to be almost totally blind.

At present he is using miotics in a number of cases of simple glaucoma in timid individuals. He will urge iridectomy as soon as he sees evidence of failure in the vision or size of color fields. The results that he has obtained by iridectomy in simple chronic glaucoma have been so good that he is decided in favor of early operation in all cases in which the disease can not be arrested by a fair trial of miotics. He does not hesitate to operate when central vision is still normal in cases in which the symptoms are positive. In the cases in which there is loss of visual field near the point of fixation, if miotics do not control he does not hesitate to operate for fear of an untoward result, such as sudden failure of this part of the field after operation. He does not think that chronic glaucoma is any more "essentially a disease of the posterior segment of the eye" than are other forms of glaucoma. Both are due to a disturbance of the balance between inflow and outflow of the fluids of the eye. The difference is that in the congestive form the disturbance is more marked. The strictures regarding the use of miotics, he said, meet with his full approval.

DR. CHARLES S. BULL, New York, said that he agreed with Dr. Posey that operative procedures are always to be deprecated when other means are equally valuable. The point for us to determine is, Have we other means equally valuable?

Iridectomy will not control the glaucomatous process in all cases, he said, and iridectomy is well nigh valueless in chronic simple glaucoma, unless it be done early in the progress of the disease, the moment that the field begins to be contracted, the moment the signs of cupping of the disc begin and the moment that increased tension is recognized If the operation be done at this time and under these conditions, Dr Bull believes that an iridectomy will arrest the process in most cases If, however, the ophthalmologist waits until all the symptoms are more developed the field narrower and the cupping deeper, the operation will fail to relieve and will often accelerate the course of the disease For some years in more advanced cases he has followed the line of treatment indicated by Dr Posey, and has been at least satisfied with the results He agreed with Dr Posey that the surgeon who faithfully tries this method of treatment will be surprised at the long maintenance of useful vision. But this treatment is of no avail in any type of the disease except the simple, chronic, non congestive type It should not be forgotten that as the eye becomes habituated to the miotic its strength should be gradually increased More over, the effects of the miotics are transient, lasting but two or three hours, and at the end of this period the dose should be repeated, for in this method of treatment it is all important that the pupil should be kept contracted ad maximum. He also agreed with Dr Posey that we should begin with a small dose. If eserin is used, a strength of from one-tenth to one-fourth of a grain is strong enough, to be increased as the eye becomes habituated to the drug The irritation caused by a strong solution should be carefully avoided The salicylate of eserin is to be preferred to the sulphate. Together with this treatment the patient's habits of life should be modified, so far as possible, to the necessities of the ocular condition All close work should be either forbidden or at least restricted, especially by artificial light. The patient should lead an out-of door life, the bowels should be regulated and constant attention directed to the regulation of the peripheral circulation

DR G L DE SCHWEINITZ, Philadelphia, declared that many ophthalmologists are in accord with Dr Posey in so far as his estimate of the value of miotics in the treatment of so-called chronic glaucoma and that many are totally opposed to iridect omy In a discussion on a paper by Dr de Schweinitz on "The Treatment of the Apparently Unaffected, but at Most but Slightly Involved, Eye in Cases of Monolateral Glaucoma," read before the American Ophthalmological Society five years ago, many ophthalmologists expressed the opinion that iridect omy or operation in general is worthless and that there must be recourse to miotics and to various internal remedies, al though few were willing to agree that iridectomy was of prac tically no value and likely to do more harm than good He said that one difficulty is the difference in opinion as to what constitutes chronic non inflammatory glaucoma While some believe it to be a chronic progressive optic nerve degeneration, others recognize as this condition only cases in which there is progressive failure of vision, excavation of the optic papilla, crowding of the vessels to the nasal side, halo around the nerve head and increased intraocular tension, which is not constantly present, but which may be present for short periods of time at various intervals during the day or night With these symptoms there is entire absence of inflammatory changes, the anterior chamber being of fair depth, the pupil active and the sclera not congested Dr de Schweinitz supposed this is the type re ferred to by Dr Posey At the Lucerne congress, in 1904, Abadie expressed his opinion that iridectomy is harmful in this disease, which, he said, should be treated with miotics, or, if these fail, by sympathectomy Dr de Schweinitz said that there must be some middle ground between Berry, who says that miotics are useless in chronic glaucoma, and those who be-lieve that iridectomy is valueless and does more harm than good Dr de Schweinitz said that Dr Posey is not quite fair to Cheney when he quotes him as saying that 'loss of sight without operation is of course, inevitable in chronic glau coma" What Cheney says is "The age of the patient should largely decide for or against operative interference, and in a healthy individual, 40 years of age, for example iridectomy might be advised and even urged because loss of sight without iridectomy is inevitable ' He goes on however and remarks that as age advances the necessity for urging operation is less marked, and although it might be proper even after 65 or 70, one should not lose sight of the fact that the patient may die before his sight is lost If one eye is blind and the disease has manifested itself in the other, Cheney would avoid operation and presumably would use miotics if the patient was over 60 years of age, unless the progress of the disease in the first eye had been of exceptional rapidity

Dr de Schweinitz is satisfied of the value of miotics in this disease, no matter at what age it occurs, and believes that they should be given continuously so long as they do good He also believes that operation should be governed to a certain extent by the arterial tension and if the arterial tension be persist ently high, operation should be deferred, lest a malignant glau coma arise In regard to Dr Posey's statement that he re-gretted the lack of statistics, Dr de Schweinitz referred him to de Wecker's monograph and to a paper which he himself read before the Section on Ophthalomolgy in 1899 Dr de Schwei nitz agreed with those who approved of the use of miotics in this condition and spoke particularly in favor of nitroglycerin provided that there is increased arterial tension He empha sized the necessity for keeping the patient under observation If the patient is advanced in years he would hesitate to do iridectomy, especially if there is high arterial tension or symp toms of arteriosclerosis, even if vision fails under the use of miotics, unless the case changed from chronic glaucoma to the subacute or congestive form

If there is a disease characterized by progressive atrophy of the optic nerve, cupping of the nerve head, contraction of the field of vision and no periods of increased intraocular tension, these cases would certainly not present the indications for iridectomy, nor would they seem to present those for miotics In the majority of cases in which this syndrome is present, careful examination will reveal that there are temporary pe-riods of increased intraocular tension, and this, de Schweinitz said, is also de Wecker's belief

DR. W H. WILDER, Chicago, said that he is coming to believe that no good is done chronic glaucoma cases by iridectomy, particularly that class of cases to which Dr de Schweinitz has referred Dr Wilder believes that many of these cases of so called glaucoma are injured rather than benefited by opera tion. He has seen the fields contract more rapidly after opera tion and the central acuity lessen We subject our patients to the risk of an operation which he considers one of the most difficult in all surgery He hesitates about operating in these cases, and he believes the time is coming when we will know that this simple glaucoma bears no relation to general glaucoma except that it has cupped disc and sometimes increased tension He thinks that the practice of teaching that glaucoma is a disease entity rather than a syndrome should be discontinued It is a condition more dependent on general causes than on local ones The keynote of the whole matter is that ophthal mologists must study the changes going on in the vessels and the increased arterial tension Constitutional treatment is of more importance, he said, than iridectomy

DR PETER A. CALLAN, New York, said that it is not always a question of whether we want to use miotics, but of the pa tient refusing operation, thus obliging us to use them If something is not done in the majority of cases these patients go from bad to worse. He has a patient whom he has had under treatment for three years because the man was not willing to submit to operation, but in several other cases while the vision remains good the fields are slowly and surely contracting If Dr Callan had glaucoma in one eye and the other showed no more evidence than contracted field, he would have the eye operated on He thinks that an iridectomy properly performed is in no way harmful He does not use the Graefe knife with incision at the limbus he said that we should get back from the limbus 2 or 3 mm and secure an iridectomy not to exceed 4 or 5 cm This is perfectly feasible even with a very shallow anterior chamber If the patient has one blind eye from glau coma and in the other 20/70 vision and is old he would u e miotics, but he feels that iridectomy does no harm whatever if done properly

DR. WILLIAM C POSEY, Philadelphia, [illegible] doubt for a moment the value of irid[illegible] coma, but the question is not that,

positive service in these cases, and are we justified in relying on them? For example, what is our duty in such a case as this A patient has glaucoma in the initial stage, vision normal, both centrally and peripherally, slight cupping What is to be done? Advise operation at once, or are there other methods to be employed? Authorities predominate in favor of iridectomy When questioned if there is any danger from the operation, one may say, Yes, some eyes are lost But even if this disaster does not occur, vision is never quite so good after the operation as it was before There is always an astigmatic error following the corneal incision, and in many cases there are changes in the anterior capsule and in the lens When told of these disadvantages, patients want to know whether there is anything to be done aside from operation, and what Dr Posey insisted on is that ophthalmologists are warranted in assuring them that there is The patients should be warned, however, that the treatment must be carried on the rest of their lives If this be done conscientiously, and care be given to the manner of living, etc, it is not too much to tell them that sight may be preserved for many years, perhaps as long as life lasts The one indication for iridectomy in chronic glaucoma, in Dr Posey's opinion, is the presence of inflammatory symptoms, and it has been his experience that if miotics be continuously and properly administered in cases of a purely simple chronic type, such symptoms will but infrequently arise He declared that the purpose of his paper was to indicate the undoubted value of miotics in chronic glaucoma and to ask that they be given the general respect and use which they deserve

SYMPOSIUM ON ALCOHOL

(*Continued from page 687*)

DISCUSSION

DR. WILLIAM LEE HOWARD, Baltimore, said that even yet the average physician does not know the difference between inebriety and dipsomania During the past year he had one or two little clinical experiences that were new to him Both patients were Army surgeons They were truthful men, and Dr Howard had no reason to disbelieve any of their statements Both came to him for the periodical sprees or the treatment for dipsomania One man was 42, the other 47 Both men told the same history of going into Army life late, *of not being accustomed either to the rules or to the* climatic conditions Neither had been accustomed to drink to any extent. The attacks of dipsomania were conditions unknown until they had been in the Philippines from a year and a half to two years One man would go off and disappear for from five to six weeks, with only a faint, hazy recollection of his condition During that time he would generally consume enormous quantities of liquor, as dipsomaniacs will. The other also had attacks of dipsomania, with some sexual excesses The history of both of these men was that the heat of the climate, conditions, etc., seemed to unstring them, and both of them had succumbed to heat stroke and both had been in the hospital for intestinal troubles, so called, dysentery at least Dr Howard said it was evident that there was a physical basis for this disturbance of the nervous organization which caused them to disappear at periods One was an Irishman He resigned from the Army and returned to Ireland He reports that he has not had an attack for six months, but at the same time he does not feel himself Dr Howard believes that in all cases of dipsomania a physical cause, such as autointoxication, should be looked for

DR JOHN HUNTER, Toronto, Ontario, spoke in regard to inebriates found in the streets paralyzed from acute alcoholism He thinks it would be a very much more humane plan if, instead of throwing them into the police wagon, an ambulance be sent for to take them to a special ward in an emergency hospital, because these men are in a very much more dangerous condition physically than a man who breaks his arm or his leg He believe that the moral effect on them would be a thousand times better than the effect produced by being *cast into prison fined a small fine or retained a number of* days The care of a hospital for a week or ten days is as necessary for a person recovering from an acute attack of alcoholism as from a broken arm Dr Hunter referred to the evil influence on children who witness the common treatment of drunkards found by the police

DR. CHARLES E WOODRUFF, Detroit, said the reason why the Army does not do as the best railroads do and insist on total *abstinence in important places is that the railroads* themselves do not insist on total abstinence except in a very limited class of employés The men who work the pick and shovel, the section hands, etc, the railroad does not care about, it is the men who have the lives of others in their hands, the engineer, the fireman, the train dispatcher, the telegraphers, conductors, brakemen, watchmen They get very high pay and the company can make selection The engineers get from $200 to $300 a month or more Our soldiers get only $13 a month, and we can not make a selection If Congress would raise the pay of the common soldier to $125 a month we could get 90 per cent of abstainers in the U S Army, and the whole question would be settled

PLAGUE IN AMERICAN CITIES

(*Continued from page 688*)

DISCUSSION

DR ELMER E HEG, Seattle, Wash, said that so far as he knows there has never been a case of plague in Washington He emphasized Dr Foster's statements that plague must be always guarded against, especially by those in seaboard towns Plague has been a nightmare to Dr Heg ever since it has been in San Francisco He agreed that plague may go half a mile or for thousands of miles, that it is carried by rats and fleas So few physicians see cases that the great danger is in overlooking them and allowing the infected districts to continue and the disease to be carried from one place to another Dr Heg thinks that we do not know exactly the full extent of the animals that are liable to infection

DR T B BEATTIE, Salt Lake City, Utah, thinks that one point worthy of note brought out in the experience of California is the importance of avoiding concealment in the presence of serious epidemics of disease. At first the authorities in that state and in the City of San Francisco were inclined to conceal the fact after they had reason to know that the disease existed in the community, because of a false idea as to the protection of the interests of the community While in most states the question of plague is not one that would seem to concern the health officer at this time, yet the lesson can be applied to all states and to the experience of all health officers in connection with that sentiment which obtains on the part of a good many members of the community—those who think their commercial interests are affected by the publicity attendant on the efforts of the health organization to suppress epidemics Dr Beattie stated that in the states of Utah and Colorado, during the epidemic of smallpox, the health *authorities had very little support from the public, and were* very seriously criticised for endeavoring to make known the prevalence of the infection The consequence was that the press took it up, as they did in San Francisco, and very much *confused the problem, and unquestionably, the result was a* greater prevalence of the disease than otherwise would have resulted Dr Beattie also referred to the rebuke that was visited on the authorities in California when the fact once became *thoroughly exploited throughout the country, and* said that it was deserved

DR J W AMESSE, Public Health and Marine Hospital Service, stated that he was on duty in San Francisco in 1900 as Dr Kinyon's assistant when the plague first broke out there and that later, in Honolulu, Japan, China and Manila he had opportunity of seeing about two hundred cases He believes that the rat is the primary host, and the flea the intermediary host The rat, dying of the plague, and its coat containing numbers of fleas, these leave the dead body as soon as they possibly can and seek the nearest living body, which is usually the foot or leg of a native In China almost every one goes with bare feet, the disease is endemic, but in China

town, San Francisco, where the Chinese are well clothed and have plenty to eat and drink, the plague finds a very difficult foothold, in fact, it does not spread. Dr Amesse believes that in four years there were but eighty cases of the plague in San Francisco, and this was attributed entirely to the fact that the Chinese were living under so much better auspices than their brethren in China, and to the further fact that they wore shoes, and thus afforded very little opportunity for the fleas to locate Dr Amesse earnestly endorsed the recommendations containing surveillance of seaboard towns

DR. W C RUCKER, United States Public Health and Marine Hospital Service, Vineyard Haven, Mass., said that one statement requires some further elucidation that is, the question of the squirrels that were spoken of as carrying the disease Dr Foster, he said, evidently had not heard of the researches of Dr Donald H. Currie, of the Public Health and Marine Hospital Service, in this particular premise. Dr Currie examined these squirrels very carefully and came to the conclusion that they were undoubtedly suffering from plague, and he found that an epidemic of plague was taking place in them Dr Rucker does not think that Dr Currie has ever written this, he told him in personal conversation From this Dr Currie has formulated a theory that possibly there may be plague some day in the Mississippi Valley, possibly it may spread further east entirely by means of these rodents These ground squirrels, which at that time were having an epidemic of plague in California, could easily carry the disease to other ground squirrels and across the mountains, and these in turn to the gophers inhabiting the Mississippi Valley, and they in turn would bring it to the ground squirrels on this side Dr Rucker saw nineteen or twenty cases of plague when on duty in San Francisco, and, like Dr Amesse and every one else who has seen the disease, the transmission by the rodents is undoubted in his mind. In regard to the concealment of the disease, Dr Rucker thinks that the idea that a community can better its commercial interests by concealing an epidemic disease is a very erroneous one, and that the concealment in the end causes greater harm to the commercial interests than if the officials had been frank and honest about it in the first place The concealment of disease when it has been discovered leads always to the belief that the health authorities are dishonest, and then when they do come out and say there is disease one always says in his own mind "There is more disease than is really stated, and since they have lied to us once they will lie to us again" Dr Rucker thinks that health officers should bear in mind certain ideals which they must uphold, and said that they must not bow down to the mammon of commericial greed When they find a thing they must fearlessly and honestly state exactly what they have in the way of an epidemic, and then the public will not think that there is more than is stated. Commercial relations will not be so much disturbed as if they had concealed the disease and then declared it after it had been found out

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and methods of treatment for the diseases seen especially in every day practice Contributions will be welcomed from our readers.]

Simple Elixir

Edgar F Heffner, Ph G, in the *Pennsylvania Medical Journal*, discusses simple elixir as a vehicle in prescriptions intended for children He was astonished to find occasionally a physician who thought simple elixir contained no alcohol, while the majority were of the opinion that simple elixir and the medicinal elixirs of which it forms its basis, elixir calisaya, elixir gentian etc., were of very slight alcoholic strength The following prescriptions have come under his observation and are examples not only of pharmaceutical error, but also of incorrect prescription writing

For a child four months old

℞	Sodii bromidi	gr viii	5
	Elix. simplicis	ʒi 30	

Sig Teaspoonful every half hour or one hour, as needed.

For a 6 year old child

R	Potassii bromidi	gr xlvi.i	3
	Elix valerianatis ammonii	ʒiv	15
	Elix simplicis, q s	ʒiii	90

Sig One or two teaspoonfuls in water every one or two hours, as needed

No physician would give a child four months old a quarter teaspoonful of alcohol every half hour, yet that is what the child would have been given had the prescription been filled as written. Compared with beer, it would have been the same as giving a tablespoonful, or equal to two teaspoonfuls of wine, or over half a teaspoonful of whisky or brandy

Prescription No 2 shows the same thing in a more frequently used form—the 6 year old child would get with each two or four grains of bromid the equivalent in strength of one half or one whole teaspoonful of whisky, which would effectively counteract the sedative effect of the bromid.

Says Heffner "These examples need no extended comment as to the possible injurious effect of the alcohol on children, as we all fully appreciate them It impresses on our minds the fact, however, that we must occasionally refresh the minds of our medical friends in cases of this nature, and the information, if given in the proper spirit, will be thankfully received by any physician needing it"

Heffner believes that the very common practice of giving bromids and similar sedatives in simple elixir is not a good one, as the effect of the bromid is seriously interfered with by the alcohol contained in the elixir

The following is an example of a prescription fairly common in some localities

℞	Sodii bromidi		
	Chloralis hydratis, āā	ʒiv	15
	Elixir simplicis, q s	ʒiv	120

Sig Two teaspoonfuls in water every half to one hour

This at first makes a bright, clear solution and the chemical incompatibility of chloral and alkaline bromids in alcoholic solution would be generally overlooked On standing half an hour the chloral alcoholate will come to the top in a clear layer about one fourth of an inch thick, and of a color very closely resembling the rest of the mixture In one case the mixture was dispensed without a "shake" label, and the patient got nearly all the chloral in the form of alcoholate at the second dose The use of an aromatic water and simple syrup as a vehicle in prescriptions of this nature would obviate any such danger

Neuralgia and Headache

Williams, in the *Clinical Journal*, states that two factors suggested by the presence of a neuralgia are an unsatisfactory blood state and the existence of an irritant Anemia is certainly the commonest representative of the first factor Whether this be due to convalescence from acute disease, to chlorosis, or to deficient coagulability of the blood or other cause, it is very frequently attended by neuralgia, more especially about the head and lower part of the trunk on the same side

The treatment in such cases of neuralgia resolves itself into the treatment of the anemia by hygienic dietetic and medicinal measures Outdoor life in a bracing climate is to be advised. The diet should be generous including meat food and wines in moderation and plenty of fats Fats seem to be concerned in some very special manner with the nourishment of the nervous system and may be freely given in the form of butter and cream Iron stands first among the drugs and Williams believes that the citrates and tartrates are more efficacious than the stronger salts such as the sulphates and chlorids The latter are more apt to upset the stomach while the former seem to be more readily assimilated A useful formula is as follows

℞	Ferri et ammonii citratis	ʒiss	10
	Liquoris potassii arsenitis	ʒi	4
	Infusi quassiæ q s ad	ʒvi	30

M Sig One tablespoonful [illegible] a [illegible] [illegible]

The following may be given later

℞ Ferri et quininæ citratis sol 3v 20
Liquoris potassii arsenitis 3iss 6
Tincturæ nucis vomicæ 3ii 8
Aquæ aurantii floris, q s ad ℥xvi 500

M Sig One tablespoonful three times a day, after meals

The iron preparations in both the above mixtures may be increased, and Williams is of the opinion that the presence of the quinin in the mixture and in even larger doses may help to subdue the neuralgia When giving iron in any form it is of the utmost importance that the bowels be kept open Aloes seem to enhance the value of the iron and may be given alone or with cascara A daily morning dose of a natural or artificial mineral water is often advisable

When the neuralgia is an obstinate feature of the condition it is usually necessary to administer something which has a direct influence on the pain when it occurs In anemic patients and in those in whom defective nutrition is pronounced he has had better results from quinin and gelsemium than from any other combination

℞ Quininæ hydrochloridi m lxxx 5
Acidi hydrobromici dil 3v 20
Tincturæ gelsemii m lxxx 5
Aquæ chloroformi, q s ad ℥viii 240

M. Sig One tablespoonful every one half to one hour until the pain ceases Not more than four doses to be taken.

Even larger doses of gelsemium may be given Williams thinks that the small doses frequently repeated are better than a single large dose.

In the gouty state with the neuralgic pains it is necessary to emphasize the advisability of examining for high arterial tension. If present the iodid of potassium is of special value in the treatment of the accompanying neuralgia A frequent cause of neuralgia, especially in women, is the toxic state of the blood induced by chronic constipation This condition must be treated by appropriate measures

Flatulent Dyspepsia

The *Medical Record* recommends the following

℞ Aquæ chloroformi
Aquæ menthi piperitæ
Aquæ dest, ää ℥ii 60

M Sig One teaspoonful before each meal

Stye.

Bjorkman in *Merck's Archives*, recommends the following for this condition

℞ Hydrargyri oxidi rubri gr xii 70
Petrolati
Unguenti aquæ rosæ, ää 3iv 15

M Sig Apply morning and night after thoroughly cleansing with a hot boric acid solution

Cough in Phthisis

Shoemaker recommends the following mixture for the irritative cough so frequent in this condition

℞ Codeinæ gr i 065
Acidi hydrobromici dil ℥i 30
Syrupi aurantii, q s ad ℥iii 90

M Sig One or two teaspoonfuls every two to four hours for cough

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Medicolegal

Liability for Removal of Uterus Without Consent

The Supreme Court of Illinois on the appeal of Pratt vs Davis, an action by the latter party, by next friend, for trespass to the person, has affirmed the judgment of the Appellate Court affirming a judgment in the plaintiff's favor for $3 000 The decision of the Appellate Court was reported at length in the Medicolegal department of THE JOURNAL, March 11, 1905 page 822.

In partial explanation of the case, the Supreme Court says that at the time of the wrong charged the defendant was engaged in conducting a sanitarium The plaintiff, a married woman about 40 years of age, came to this sanitarium for treatment for epilepsy in May, 1896 She had been subject to epileptic seizures for a period of 15 years, but up to this time she had been able to perform her household duties and had borne four children, three since she first exhibited symptoms of epilepsy The seizures had gradually been increasing in frequency Following each of them she would be very weak in body and dazed and uncertain in mind for several hours The evidence of those who knew her in her daily life was generally to the effect that her mind, except during the periods immediately following these attacks, was normal The defendant made an examination of the pelvic organs, and found that the uterus was contracted and lacerated, and that the lower portion of the rectum was diseased On May 13 he operated for these difficulties Thereafter the plaintiff remained in the sanitarium without improvement several weeks and then returned home On July 29, her brother in law, at the request of her husband, took her again to the sanitarium, and on the next day the defendant performed a second surgical operation on her, removing her ovaries and uterus She continued at the sanitarium until August 8, and then was removed to her home Neither operation was successful, so far as improving her health was concerned. She grew gradually worse mentally, and on August 25 was adjudged insane and sent to a state asylum The cause of action was based on the removal of the uterus at the second operation It was not claimed that the operation was unskillfully performed, but that it was performed without the authority or consent of the plaintiff and constituted a trespass to her person.

The declaration, so far as here material, averred that the plaintiff had placed herself under the care of the defendant, and that he, without her consent or the consent of any one authorized to act for her, anesthetized her and removed the uterus There was no pretense that the plaintiff herself consented to the removal of the uterus In fact the defendant testified that he told her just enough about her condition, and what he proposed to do, to get her consent to the first operation, and said, quoting his own language "I worked her deliberately and systematically, taking chances which she did not realize the full aspect of, deliberately and calmly deceiving the woman, that is, I did not tell her the whole truth." And, referring to the first operation, he said "She knew that the womb was to be operated on, and she was willing that should be done Consent for further work was not obtained" Thereafter the defendant contended that the plaintiff was so mentally unsound as to be incapable of consenting or of giving intelligent consideration to her condition, and that her husband authorized the second operation Whether the defendant was then mentally incapable of consenting was a question as to which the evidence was conflicting

Ordinarily, where the patient is in full possession of all his mental faculties and in such physical health as to be able to consult about his condition without the consultation itself being fraught with dangerous consequences to the patient's health, and when no emergency exists making it impracticable to confer with him, it is manifest, the court goes on to say, that his consent should be a prerequisite to a surgical operation Where the narr (declaration) shows the act to have been a trespass to the person, or avers it to have been without the consent of the patient, it would seem to be unnecessary to go further and negative the fact that some other person, lawfully authorized to act for the patient, consented. The question of the consent of such other person, if in the case, might well be left to be presented by a plea in bar

Furthermore, the Supreme Court is satisfied that the evidence as abstracted did not tend to show that the husband consented to the second operation He testified that he did not, and that, when he first took his wife to the sanitarium, the defendant told him the operation would be a trifling one The defendant said that, while he may have said this, "Davis said he was willing that I should do anything I thought necessary, only he made the request that I do as little as possible," and that he then told Davis, in substance, that two operations might be necessary He also testified that while the plaintiff was at home her husband "told me she was no better I told him to bring her back for the finishing work I did not tell him what the finishing work would be I had but one comprehensive talk with him That was the

time he was there with the plaintiff" These two conversations were relied on by the defendant as authority given by the husband for the second operation Without deciding what legal effect should be given to the husband's request or consent that a grave surgical operation be performed on his insane wife, the court thinks it manifest that the authority given by the husband in the conversation first quoted from was exhausted when the first operation was performed and the patient taken away While it was true that the defendant said he told the husband in that conversation that he could not tell the extent of the surgery that would be necessary, and said that the defendant gave him carte blanche to do whatever he saw fit, it was yet apparent that neither then contemplated that the wife would be taken home after the first operation and later brought a second time to the sanitarium for the purpose of undergoing a second operation, and the court thinks it equally apparent from the defendant's testimony that the husband did not, at the time he was directed to bring his wife again for treatment, understand that any such operation as the removal of the ovaries and the uterus was to be performed, and that the mere fact that he, after that conversation, had his brother take the plaintiff to the sanitarium, was not to be regarded as tending to show consent to surgery of that character

The defendant then contended that, in the absence of express authority to remove the uterus, the law would imply the necessary consent from the fact that consent was, as he said, obtained for the removal of the ovaries But as there was no evidence which tended to show that any permission was obtained for the second operation, when the ovaries were in fact removed, the court holds that there was nothing to raise the implication in question

Again, it was urged that the evidence showed no actual damages, that the judgment must therefore be made up of nominal damages and exemplary damages, and that this was not a proper case for the infliction of a penalty, wherefore the judgment should be reversed The claim that there was no proof of actual damages was based on this statement found in the defendant's argument "There is nowhere in the record a syllable showing any pain or suffering as a result of the removal of the uterus" But the Supreme Court says that some facts require no direct proof That pain and suffering follow the removal of the uterus is one of such facts The law infers pain and suffering from personal injury

Finally, the Supreme Court says that where the patient desires or consents that an operation be performed, and unexpected conditions develop or are discovered in the course of the operation, it is the duty of the surgeon, in dealing with these conditions, to act on his own discretion, making the highest use of his skill and ability to meet the exigencies which confront him, and in the nature of things he must frequently do this without consultation or conference with any one, except, perhaps, other members of his profession who are assisting him Emergencies arise, and when a surgeon is called it is sometimes found that some action must be taken immediately for the preservation of the life or health of the patient, where it is impracticable to obtain the consent of the ailing or injured one or of any one authorized to speak for him In such event, the surgeon may lawfully, and it is his duty to, perform such operation as good surgery demands without such consent The case before the court, however, does not fall within either of these two classes

Insufficient Presentation of Case for Revocation of License—Court Not Body of Medical Experts.

The Supreme Court of Rhode Island furnishes, on the appeal of Macomber vs State Board of Health, some suggestions for those seeking to have licenses revoked for "gross unprofessional conduct" or "conduct of a character likely to deceive and defraud the public," as in this case. It says that it was evidently the intention of the State Board that the court should infer from the language of various advertisements, that the statements therein contained were untrue, that the claims made were extravagant and therefore likely to 'deceive and defraud the public" and that the physician by allowing his name to appear on some of them, or by distributing some of them to his patients or to inquiring parties, had been guilty of such conduct Unfortunately, however, the State Board had not seen fit to offer any testimony to show that any one of the statements set forth was untrue in fact, or even that it was extravagant or misleading, or tending to "deceive' or "defraud the public." The evidence was submitted to the court as if the court were a body of medical experts fully qualified to pass on the numerous medical questions involved. It is hardly necessary to say that this court disclaims such qualification and can not take judicial notice of such matters, but is bound to form its judgments in such matters solely on the evidence adduced before it. Again, the court says, with regard to a device advertised about which the State Board of Health seemed to desire it to infer that it was a deception and a fraud, that the board was satisfied to place before the court the evidence of a single application of this device to a person not shown to have been suffering from any disease, and not shown to be of any expert capacity in the observation or investigation of devices of that character, and desired the court to infer, from the apparently negative character of this single experiment, that the repeated application of this device according to the directions given by its inventor, was of no value to the patient, and therefore was a fraud and tended to "deceive and defraud the public." This evidence was purely negative, and did not assist the court in coming to any conclusion regarding the value or want of value of the device in question As to its mechanical efficiency, whether or not it was capable of producing an electric current or "thermal electricity," it would have been very simple to have subjected the device to the examination of well known electrical experts, under the conditions named in the circulars, and to have shown whether or not any such electrical energy was produced. The most cogent evidence to show that the physician had been guilty of "gross unprofessional conduct and of conduct of a character likely to deceive and defraud the public" would have been evidence from some one or more persons that he or they had been actually deceived and defrauded, had been led into expense without adequate benefit, or had been told that they would be cured of any of the various diseases mentioned, and had taken the treatment without results, or with bad results, or that the statements made as to cures actually effected were in fact untrue

THE MINORITY (DISSENTING) OPINION

[While the above is the official report, we believe it well to give briefly the dissenting opinion of one of the judges

Judge Blodgett said that he could not agree with his professional brethren that the evidence did not show "that any one of the statements set forth is untrue in fact or even that it is extravagant or misleading or tending to 'deceive or defraud the public.'" He believed that the evidence established each of these propositions In the first place it was undisputed that the appellant, Macomber, used the device known as the "Flectricure," and that he distributed generally, and gave to the secretary of the State Board of Health, the "Blue Book" (Exhibit 15), which contained the following statements "The Flectricure Absolutely Cures Consumption, Female Complaints, Paralysis, Rheumatism, Heart Disease, and all Acute Chronic and Organic Diseases, no matter what their name or origin Let no invalid despair or seek the sea the mountain or a foreign shore in search of health—perchance to die—when it can be surely found at home by the intelligent use of the Electricure for cures are wrought by it that under the old system of medication are impossible"

It appeared that the promise was not of benefit or of alleviation, but of "absolute cure" that it was not limited to certain diseases but embraced *all* Acute Chronic, and Organic Diseases, no matter what their name or origin ' that the device did not act by suggestion or through the imagination but was 'the most adequate life agent of the century More comprehensive claims could hardly be made on behalf of the fabled Elixir Vite of the ancients

Now it was evident that the representation that device "absolutely cures all Dis-

cases, no matter what their name or origin" was either true in all respects, untrue in all respects, or true in some cases and untrue in other cases If, therefore, this court could not sit as a body of medical experts and assume that such representations were untrue in any respect, without evidence, could the court sit as a body of medical experts and assume that such representations were true in all respects, without evidence? The representations were disproved by evidence of a single exception They were not sustained except by proof in all instances, and surely he must indeed be wise in the science and skilled in the art of healing who would assume the burden of affirmative proof in such a case Hence it required an even higher degree of expert knowledge to assume the correctness of such a contention in every case than to deny its correctness in a given instance But the record was not wanting in testimony that these representations were false

For these reasons and others that appeared in the evidence, and in view of the fact that the statute which prohibits conduct "likely to deceive or defraud the public" does not require actual proof of such fraud, Judge Blodgett upheld the decision of the State Board of Health]

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Medical Record, New York.

February 9

1 *Fresh Air Treatment in Hospital Wards W G Thompson New York
2 *Resection of the Sigmoid Flexure J J McGrath New York
3 *Conservative Surgery in Severe Inflammatory Affections of the Uterine Adnexa H N Vineberg New York.
4 *Cause of Common Baldness D L. Parker Detroit
5 *Potent Etiologic Factors in Backward Children M Neustaedter New York
6 *Extensive Leucoplakia Beginning in Childhood Accompanied by Follicular Keratosis of Skin and Followed by Carcinoma of Tongue M B Hartzell Philadelphia

1 **Fresh Air Treatment in Hospital Wards**—Thompson presents the following conclusions Ward heating and ward ventilation should be capable of independent adjustment at all times The night temperature of the ward should be at least 5 degrees F below the noonday temperature, which should not be above 68 or 70 F The ward windows should have transoms and one or two movable separate panes The window should be light enough to be easily handled The wards should communicate with balconies or porches The building of very large wards should be discouraged The windows of the ward, even on the coldest day, should be opened at least twice daily Day rooms should be provided for convalescents The ward should have at least one accessible heater The house staff and nurses should receive instruction concerning ventilation and should be made to put it into practice in the wards

2 **Resection of Sigmoid Flexure**—McGrath, after describing the details of his method points out some of its advantages. When the suture is applied at the mesenteric border and tied, the mesenteric "dead space" is obliterated and the serous mesenteric layers are brought down into close contact with the wall of the gut—two conditions that are absolutely essential to the successful end to end intestinal anastomosis The ends of this same mesenteric suture are used to accomplish the union of the two ends of gut, the tractors being used to facilitate the application of the suture so far as possible and the union being finally completed with the Lembert stitch In order to prevent 'pursing" of the suture a back stitch is made at every fifth or sixth thrust This method is simple and efficient and no button or other mechanism is necessary to its accomplishment

3 **Conservative Surgery of Uterine Adnexa.**—Vineberg reviews the history of 51 cases There were two deaths Of these 51 patients 43 are practically cured and have menstruated regularly and normally since the operation Vineberg emphasizes the fact that every effort should be made in the case of women under the climacteric age to cure the patient without sacrificing all her pelvic organs and without bringing on the artificial menopause

4 **Cause of Common Baldness**—Parker states that common baldness accounts for more than 90 per cent of all cases of baldness He discusses in this paper a theory that makes common baldness depend for its existence on a double cause, one being the remote or fundamental cause represented by the absence of upper chest breathing, a condition that allows a poisonous substance to develop in the lungs, the other, the direct or exciting cause, represented by the effect produced by this poisonous substance circulating in the blood.

5 **Etiologic Factors in Backward Children**—Neustaedter concludes after carefully studying 95 cases of backward children in one school that it is the addiction to alcoholic stimulants or strong decoctions of tea or coffee, or to the smoking of cigarettes, or to a combination of two or all of the poisons enumerated that far outweighs in etiologic importance all of the physical defects combined After discussing in detail the effects of these substances he declares that the use of alcohol, tobacco and coffee or tea is an immediately exciting cause of backwardness in children

6 **Extensive Leucoplakia Beginning in Childhood**—When first brought to Hartzell the patient was 11 years old There was present an affection of the skin which consisted of irregularly shaped, variously sized patches of dirty gray spines on the sides of the neck, and hempseed sized, flat, slightly elevated, scaly lesions scattered over the back. These lesions were regarded as keratosic Besides the cutaneous disease, the entire mucous membrane of the lips, tongue and cheeks was a bluish white The skin disease had lasted 18 months The duration of the leucoplakia was not certain After treatment the skin affection disappeared, but the leucoplakia was scarcely affected About four years later an epithelioma of the tongue was discovered The growth was removed, but a few hours later the patient unexpectedly died from what was supposed to be pulmonary embolism

Boston Medical and Surgical Journal.

February 7

7 *Tumor of the Spinal Cord Leading to Destruction of the Lumbar Region Hydrocephalus Double Optic Neuritis and Painless Labor F W Taylor Boston
8 Control of Syphilis and Venereal Diseases P A. Morrow, New York

7 **Tumor of the Spinal Cord.**—The essential features of Taylor's case are as follows A young, pregnant woman was suddenly seized with radiating pains down both legs, in September The pain increased, and walking became difficult on account of the pain The urine was at first under control Later, the pain extended to the bladder and rectal regions, and in the latter part of December difficulty in micturition supervened, necessitating the occasional use of the catheter Beginning mental disorder appeared at this time, pain extended into the back There was beginning paralysis of the legs, standing alone being impossible, the urine was passed only with extreme difficulty, sensory disorders in the legs rapidly supervened, together with disappearance of the reflexes There was increase of mental confusion, disorientation as to time and place, extreme constipation, and complete urinary incontinence Thereafter headache, much restlessness and discomfort, stiffness of the neck, and sensitiveness on moving the head occurred, there was also increasing headache and beginning optic neuritis, going on later to blindness In the middle of January a painless labor occurred, the patient giving birth to a healthy child. There was a prickling sensation in the arms, but without paralysis During February there was persistence of complete transverse lesion of the cord, with no faradic response in the muscles of the legs Very marked mental disturbance supervened with final loss of the power of speech, and increasing apathy Death occurred six months from the onset of the first pain There was found at the postmortem an extensive tumor of the spinal cord, destructive in the lumbar region, and associated with internal hydrocephalus

New York Medical Journal.

February 9

9 *Open Air Treatment in Psychiatry W Mabon New York.
10 The Scranton Typhoid Epidemic. J M Wainwright, Scranton Pa

11 *Perforation of the Bowel in Typhoid J A Scott Philadelphia
12 Radical Operation for Empyema of the Antrum of Highmore L Réthi Vienna
13 *Etiological Factors of Invalidism Following Childbirth J C Applegate Philadelphia.
14 *Atypical Manifestations of Paludism J J France Ports mouth Va
15 Degenerative Types of Myocardial Disease. H Brooks New York.
16 Beriberi Its History Symptoms Causation and Treatment J P Francez Carencro La

9 Open-Air Treatment in Psychiatry.—Nabon says that the experience of the Manhattan State Hospital for the past five years shows conclusively that the open air treatment is par ticularly beneficial to the following classes of the insane 1, The tuberculous, 2, the feeble and untidy, 3, the retarded convalescents, and 4, the acute insane, in whom the psychosis is associated with anemic blood states, delirium and loss of sleep

11 Perforation of the Bowel in Typhoid.—According to Scott, perforation of the bowel in typhoid fever is more com mon than is generally supposed, occurring once and a trifle over in every three deaths The most common time of per foration is between the fourteenth and the twenty first days In 92 per cent of the cases in his series the perforation oc curred between the second and fifth week inclusive The earlier cases are probably perforation in a relapse, now and then perforation may occur without evidence of previous ill ness Perforation occurs in cases of all grades of severity from the ambulatory to the hemorrhagic type It is most common in those with moderate (25 per cent) and severe (50 per cent) infection (75 per cent) It is more common in the hemorrhagic than in the mild cases (from 10 8 per cent to 8 per cent) The ileum is the common site of perforation (88 per cent), the majority occur within twelve inches of the ileocecal valve, the appendix and colon, respectively, are the next most frequent sites of perforation in this series of cases Pain of some kind is present in 75 per cent of all cases In 50 per cent. of the cases the onset is sudden and severe and of increasing intensity, localizing itself to a special zone In 20 per cent of the cases the pain is of slow onset, not localized, with general distribution In some cases (12 per cent of this series) no pain is complained of, and the usual symptoms of perforation are absent Tenderness and rigidity are present in from 75 to 65 per cent, respectively, of all cases, and are usually combined, in some cases either one or the other may be wanting, rigidity especially may be absent in cases with rather a pendulous and relaxed abdominal wall

13 Etiologic Factors of Invalidism Following Childbirth.—Applegate is inclined to the belief that the predominant etiologic factors are "faulty technic" and too little regard for the "minor details" in the conduct of pregnancy, labor and the puerperium The major details are of necessity, as a rule properly cared for

14 Atypical Manifestations of Paludism.—France cites cases to show that chill, fever and sweating are not always the mode of onset of malarial infection, that the seat of pathologic change or congenital defect is often the point of attack of plasmodial invasion, that periodicity is one of the pathognomonic symptoms of all forms of paludal infection, and that women are oftener the victims of malarial infection than men

St. Louis Medical Review
February 2

17 Medicinal Treatment of Trigeminal Neuralgia with Report of Two Successful Cases G W McCaskey Fort Wayne Ind
18 Abdominal Injuries H C Dalton St Louis
19 Pathologic and Clinical Diagnosis of Sarcoma. M. G Seelig St Louis

Lancet Clinic, Cincinnati.
February 9

20 Typhoid Fever I H C Cook Hattiesburg Miss
21 Business Aspect of Medicine G Strohbach Cincinnati

Texas State Journal of Medicine, Fort Worth.
January

22 Plea for Individual Scholarship M L Moody Greenville Tex
23 *Rupture of the Diaphragm J E. Hodges Houston Tex
24 Ovarian Secretions in the Economy of Woman M Duggan San Antonio
25 Surgical Operation of the Labium Frenum T G Bradford Dallas.

26 Study of Four Hundred Miscellaneous Urines with Special Reference to Cast Finding M A Wood Galveston
27 *Formaldehyd Gas as a Germicide and Insecticide when Gen erated from Formalin J T Terrill Galveston
28 Dento facial Orthopedia Its Importance and Possibilities J G Fife Dallas
29 *Report of Unusual Railway Injury W C Jones
30 Developments of Modern Surgery J M Inge Denton Tex
31 Chronic Malaria J T FitzSimon Castroville Tex
32 Digestive Disorders as Cause of Epileptic Seizures T W Conerly San Angelo Tex.
33 Benefits to Young Children from Climatic Changes E. T Neathery Sherman.

23 Rupture of Diaphragm.—Hodges reports the case of a man who was struck by a locomotive, receiving severe con tusions of the left side extending from the clavicle almost to the crest of the ileum The left foot was very cold, showing that the circulation was almost cut off, and there was a double fracture of the femur and a fractured rib Two days afterward there appeared cellular emphysema over the region of the sixth rib, and it gradually became more perceptible It was necessary to sustain the patient with stimulants, but these proved unavailing The patient died The necropsy disclosed the entire transverse and part of the descending colon and the stomach in the left pleural cavity, extending high up and obscuring the collapsed lung entirely The diaphragm was found ruptured close to the attachment of the left crus, the rent being two and one half inches in diameter Just before death auscultation over the region of the cardiac apex revealed a fairly strong beat, but it seemed muffled and following the beat was a peculiar gurgle and then a distinct splash The findings at the postmortem explained the pres ence of these signs The cardiac impulse against the distended abdominal viscera caused them to gurgle and move in the fluid contained in the pleural cavity with the production of a distinct splashing sound

27 Formaldehyd Gas as a Germicide.—Terrill found on ex perimentation that the gas from ten ounces of formalin, two ounces of commercial sulphuric acid and five ounces of per manganate of potash in a properly closed room of 1,000 cubic feet space for four hours is sufficient for ordinary disinfec tion purposes The method can be used by an inexperienced person, if clear directions are given, and the disinfection can be done in a day, the room being used again after two or three hours airing especially after a little ammonia has been vaporized in it As an insecticide Terrill recommends a mix ture containing double the quantities of each ingredient men tioned above, and six hours exposure

29 Unusual Railway Injury.—An examination of Jones' patient, who was caught under the tender of a wrecked freight engine disclosed the following injuries The right leg was crushed above the knee, a comminuted fracture, with a con siderable laceration of the soft structure, external to and opposite to the seat of the fracture There was also a wound in the region of the perineum which extended from the os pubis down to and beyond the rectum, on to the coccyx which was fractured All the structures comprising the perineum were mutilated lacerated or destroyed The wound involved all the muscles of the pelvic outlet the ischiorectal region and the anal and genital triangles Inside of the pelvis all the muscles attached to the ischium were lacerated and torn from their attachments and the bone denuded of its periosteum could be plainly felt All the soft structures surrounding the rectum were torn asunder so that this organ virtually stood suspended in the pelvis The rectum itself was not seriously injured The integument, superficial fascia and in fact all the structures in front of the bulbous portion of the urethra were destroyed, so that four or five inches of that organ were clearly visible, disclosing a rent of from three to four inches in the urethra in its longitudinal direction

New York State Journal of Medicine, Brooklyn
January

34 Medical Treatment of Cardiac Disorders in which Help of Sur geon is Demanded C G Stockton Buffalo
35 Surgical Aspects of Chronic Cardiac Disease J C Munford Boston
36 Stool Examination Its Value and Practice D [illegible] New York.
37 *Lithotlapaxy without Anesthesia C S Mayer Brooklyn
38 *First Year of Amalgamation in the [illegible] County of New York J M Crandall
39 History of the Medical Society [illegible] J J Walsh New York

37 **Litholapaxy Without Anesthesia**—Muren reports 16 cases of vesicle calculus in which, with one exception, litholapaxy was done without anesthesia Every effort was made to get the patient in as good condition as possible before any attempt was made to crush the stone This included bladder washings, the use of some urinary antiseptic and attention to the general health The crushings were all done in the office The results were excellent Muren emphasizes that in performing this operation without general anesthesia, care must be exercised in selecting suitable cases Unless some special contraindication exists fragmentation and removal may be repeated once a week

38 **Amalgamation in New York.**—As an example of the advantages of the new régime in New York State medicine, Crandall, the president of the Medical Society of the County of New York, presents a report to show that union and the new system of organization have brought a larger membership and greater income than ever before, and that the percentage of members who have paid their dues has been unprecedented Crandall summarizes the results of his investigations regarding the effect of amalgamation as follows The receipts from membership dues the first fiscal year after amalgamation were $2,189 greater than the average receipts for the five years preceding it, and $1,803 greater than for the year immediately preceding it, that 68 per cent of the membership was in arrears for dues on December 31, 1906, as compared with 21 per cent in arrears at the end of the year preceding amalgamation, that 2,178 members paid dues for the first year after amalgamation as compared with 1,476 for the year immediately preceding it, that is, 702 more members paid dues in 1906 than in 1905, that this increase of 702 was but partially due to the members received from the association

American Medicine, York, Pa
January

40 *Fractures of the Spine W P McIntosh Portland, Me.
41 *Congenital Umbilical Hernia. H W Yates and J E Davis Detroit.
42 *A New Proctoscope. J P Tuttle, New York.
42½ Etiology and Diagnosis of Epidemic Cerebrospinal Meningitis. N B Foster New York.
43 Urine Segregation by Means of Kidney Massage. D M Cowie Ann Arbor Mich
44 Local Bloodletting in Treatment of Dropsy of Cardiac Origin A. Devoe, Seattle Wash.
45 Gastric Dyspepsias Amenable to Surgical Treatment. W D Ground Superior Wis
46 Acute Otitic Cerebral Abscess with Notes on Technic and Diagnosis. C Jackson Pittsburg

40 **Fracture of Spine**—McIntosh reports two cases of fracture of the spine that terminated in recovery In one case a fracture of the sixth cervical vertebra was accompanied by marked deformity and crepitus but no paralysis No attempt was made to reduce the fracture until three months after the receipt of the injury Reduction and suitable after treatment resulted in a complete recovery In the second case, one of fracture of the fifth and sixth cervical vertebræ, there was dislocation forward and to the right side with very marked deformity, bulging forward of the front of the neck, flaccidity and bulging of the sterno cleidomastoids, with paralysis of both sensation and motion, abolition of tendon reflexes, but no interference with thermogenic centers The fracture was reduced and a plaster jacket was applied The patient made a complete recovery, although the extensors and supinators of the right arm were still paralyzed two months from the time of receiving the injury and the neck was stiff from ankylosis McIntosh reviews 21 cases recorded in the literature and 6 cases of fracture of the dorsal and lumbar vertebræ in which recovery took place

41 **Congenital Umbilical Hernia.**—Of the three cases reported by Yates and Davis in which a radical operation was done at four hours, sixteen hours, and one hour after birth respectively, one patient died from shock, four hours after operation, a second five days after operation, from peritonitis, making a mortality of 66 66 per cent The patient who survived the operation lived three months, succumbing to an attack of mucous colitis This patient was subject to frequent attacks of gastrointestinal inflammation

42 **New Proctoscope**—Tuttle describes a pneumatic proctoscope in which the electric lamp is enclosed in a glass globe, thus obviating all burning of the rectal mucous membrane The instrument and its use are described in full

Northwest Medicine, Seattle
January

47 Sanatorium Treatment of Tuberculosis and Its Relation to the State of Washington F H Luce Davenport, Wash
48 *Value of Tuberculo-Opsonic Index in the Diagnosis of Strictly Localized Tuberculosis W R M Kellogg, Seattle.
49 Treatment of Tuberculosis in the State of Washington. H M Greene, La Crosse Wash

48 **Value of Opsonic Index in Localized Tuberculosis**—Kellogg has determined the opsonic index in over thirty cases with some interesting results The cases which have thus far been specifically affected by treatment based on the opsonic index are those of bone and joint tuberculosis, tuberculosis of glands and subcutaneous tissues, and genitourinary tuberculosis Kellogg thinks that this treatment does not seem to apply to tuberculosis of the lungs as this is not a truly localized condition

Annals of Surgery, Philadelphia.
January

50 *End to End Arteriovenous Angiorrhapy H Lilienthal New York.
51 *Rotary Dislocations of Atlas E M Corner London
52 *Occlusion of Portal Vein Due to Surrounding Inflammatory Adhesions. G Walker
53 *Obliteration of Stomach as Result of Gastric Ulcer—Duodenostomy J B Bullitt, Louisville
54 Typhoid with Double Perforation of Ileum and Perforation of Gall Bladder O G T Kilian New York
55 Intestinal Intussusception R C Coffey Portland
56 *Resection of Ten Feet Two Inches of Small Intestines with Recovery E. Staehlin Newark
57 Fractures of the Os Calcis and Astragalus H Cabot and H Binney
58 Old Fracture of the Tarsus L W Ely New York
59 *Colossal Dermoid Cyst of Ovary of Over Fifty Years Growth H F Brownlee, Danbury Conn
60 Extirpation of Hypernephroma, Weighing 4¼ Pounds, from An Infant. W S Cheesman, Auburn N Y
61 *Intraperitoneal Rupture of the Urinary Bladder E Quick Appleton Wis
62 Drainage of Prevesical Space Through the Perineum in Suprapubic Cystotomy W T Belfield, Chicago
63 *Drainage of Prostatic Abscesses Through the Ischiorectal Fossa W C Lusk, New York
63½ Silverized Catgut. J E Blake Brooklyn
64 *Gonorrheal Osteomyelitis. R C Cupler Chicago

50 **Arteriovenous Angiorrhaphy**—Lilienthal reports an unsuccessful case of arteriosclerotic gangrene of the leg in which the artery was anastomosed with the vein without a corresponding counter anastomosis of vein into artery He says that one point demonstrated by this operation is that the danger of immediate traumatic aneurism following the implantation of artery into vein in the human subject has been overestimated.

51 **Rotary Dislocations of the Atlas**—Corner discusses the value of skiagraphy in diagnosing rotary dislocations of the atlas and reviews nineteen recorded cases He says that the five points on which to rely for a diagnosis are the position of the head, the positions and fixity of the transverse processes of the atlas, the examination of the pharynx, and the skiagraph of the lateral view of the neck

52—**Obstruction of Portal Vein**—Walker reports the case of a woman who for fifteen years had occasional attacks of what was thought to be indigestion. She was awakened early one morning by a severe pain in the right hypochondrium which radiated toward the umbilicus and downward toward the pubis It lasted for two hours There was no vomiting, no jaundice, but severe constipation and some rigidity of the abdominal muscles After this the patient lost flesh rapidly, her appetite became poor and she suffered alternately from constipation and diarrhea Four weeks after the attack fluid was first noticed in the peritoneal cavity This rapidly increased until the abdomen was markedly distended The temperature was normal, the pulse was 92, regular, but poor in volume Six liters of a clear straw colored fluid were withdrawn from the abdomen The fluid contained a large number of corpuscles and clotted readily No mass could be palpated, but there was tenderness and muscular rigidity In a short time the fluid began to return and after five weeks three liters were withdrawn Ten days afterward the patient died At the necropsy there was found an inflammatory growth about the size of an orange, which matted together the

duodenum, the head of the pancreas, the gall bladder and the under surface of the liver This mass also surrounded the portal vein and common duct The duct was patent, but the portal vein was entirely occluded for about three quarters of an inch The gall bladder contained three gallstones, which evidently were responsible for the condition

53 Obliteration of Stomach.—The patient whose history is recorded by Bullitt had constant pain in the stomach, whether the organ was empty or full, and vomited incessantly Symptoms of pyloric obstruction manifested themselves Efforts to wash out the stomach proved futile, the tube could not be made to enter the viscus The patient began to have great difficulty in swallowing food The abdomen was opened, and a mass, the size of a medium sized oyster shell was detected buried in adhesions and occupying the site where the stomach should be This was finally identified as the stomach An enterostomy was done, the duodenum being utilized for this purpose The method employed was essentially that of Witzel in making a gastrostomy The patient immediately received milk and broth through a funnel attached to the tube In ten months he gained 40 pounds He now eats everything, including meats, cabbage and sauerkraut, taking the food into the mouth, chewing it thoroughly and then directing it into a funnel connected to a tube passed about six inches into the artificial mouth For many months digestion and bowel function have apparently been uneventful. There is practically no leakage from the fistula. The patient keeps a rag stopper in the opening between feedings in order to keep the opening dilated. About six meals are taken a day The patient's general condition is good, and Bullitt says that nothing further will be done at present

56 Resection of Intestine.—In Staehlin's case the resection of the intestine was made necessary by strangulation of a large, indirect inguinal hernia

59 Dermoid Cyst of Ovary.—In the case reported by Brownlee the cyst and its contents weighed 32 pounds The condition had existed for 50 years

61 Rupture of Bladder.—Quick reports the case of a man who sustained an intraperitoneal rupture of the bladder as the result of a severe abdominal injury and subsequently suffered from anuria and a progressive abdominal distension He was operated on 254 hours after the accident, and was discharged cured on the tenth day It is noteworthy in this case that the patient performed his work as a laborer an entire day after the accident, and was not compelled to take to bed until the second day was well advanced Shock was absent

62 Drainage of Prevesical Space.—The procedure practiced by Belfield is as follows When the operator is ready to close the wound, the membranous urethra is opened in a grooved staff, the gorget introduced and the staff withdrawn A small trocar with canula is passed from above along the anterior surface of the bladder and prostate into the groove of the gorget The trocar being withdrawn, a few silkworm strands are threaded through the canula and along the gorget out through the perineal wound (a small perforated rubber drain may be attached and drawn through by the threads) A large, soft catheter with multiple perforations having been introduced into the bladder for perineal drainage, the suprapubic incision, bladder and abdominal wall are closed completely except where the threads protrude, the anterior bladder wall being anchored near the recti muscles Urine which may leak through the bladder wound, and tissue fluids, find ready exit at the bottom of this space In nine of the eleven cases in which this method was employed by Belfield the wound healed within two weeks, in the remaining two cases—prostatectomies in which oozing was allowed to block the perineal drain—the wound was reopened for the insertion of a larger drain

63 Drainage of Prostatic Abscesses.—Lusk suggests draining prostatic abscesses through the ischiorectal fossa in cases in which the abscess has not ruptured into the urethra and when a tense elastic tumor bulges toward the rectum.

64 Gonorrheal Osteomyelitis.—Cutler reports a case of gonorrheal osteomyelitis of the upper end of the left humerus coming on during the fifth week of an attack of acute gonorrheal urethritis The diagnosis was confirmed by microscopic examination Relief followed after a bone curettage

Pennsylvania Medical Journal, Athens.

January

64½ *Advances in Surgery of Nervous System T H Weisenburg Philadelphia.
65 *Late Cerebellar Abscess of Traumatic Origin. D A Webb Scranton.
66 *Fracture of Skull from Direct Violence Through Inferior Maxilla. A G Fell Wilkes Barre.
67 *Present Status of Cranial Surgery C. H Frazier Philadelphia.
68 Brain Complications Following Mastoiditis. F W Frankhauser Reading
69 *Trauma of the Head J H W Rhein and E Martin Philadelphia.
70 *Retarded Cerebral Development Due to Other than Cerebral Causes E Lapiace, Philadelphia.
71 Tuberculosis of the Spine. J K. Young Philadelphia.
72 *Analysis of Kidney Condition in 800 Cases of Scarlet Fever Treated with Chloral Hydrate B F Royer Philadelphia

64½, 65, 66, 67, 69, 70 See abstract in THE JOURNAL, Sept 29, 1906, page 1049

72 See abstract in THE JOURNAL, Oct 13, 1906, page 1220

Kentucky Medical Journal.

February

73 *Using Elasticity of Lung Tissue in Treatment of Disease of Thorax. E. W Ford, Hartford
74 Treatment of Acute and Chronic Suppuration of the Middle Ear J A Stucky Lexington
75 Early Diagnosis and Treatment of Pulmonary Tuberculosis W F Boggess Louisville.
76 The Insurance Fee. A. T McCormack Bowling Green

73 See abstract in THE JOURNAL, Oct. 27, 1906, page 1402

The Therapeutic Gazette, Detroit.

January 15

77 *Analysis of Kidney Condition of 800 Cases of Scarlet Fever Treated with Chloral Hydrate. B F Royer Philadelphia
78 Treatment of Gonococcic Conjunctivitis with Special Reference to Silver Salts G E de Schweinitz Philadelphia.
79 Diagnosis and Treatment of Multiple Neuritis. F X. Dercum Philadelphia.
80 Cholemia in Neurasthenia H Richardson Baltimore
81 Action of Several Agents on Intestinal Peristalsis, Striped Muscle and the Heart. I Ott and J F Ulman Philadelphia
82 Review of Opsonins and Bacterial Vaccines E M Houghton Detroit.

77 This article also appeared in the *Pennsylvania Medical Journal* for January

The Post-Graduate, New York.

January 1

83 Medical Examination of Children from the View Point of the Specialist H D Chapin New York
84 Demonstration of Medical Examination. G R. Plack New York
85 Examination of Children from the View Point of the Surgeon E. W Peterson, New York
86 Examination of the Rectum in Children K. K MacAlpine New York
87 Method of Examination of a Child s Eyes A E Davis New York.
88 Examination of the Ears W C Phillips New York
89 Examination of the Skin W B Brown New York
90 Examination of the Nose and Throat in Young Children H B Douglass New York.
91 Parenchymatous Transformation of the Renal Structures A Pisani, New York
92 Penetrating Wounds of the Cornea J F Virden New York
93 The Important Art of Prescription Writing W A Weightman

Virginia Medical Semi Monthly

January 25

94 Uncinariasis B B Bagby, Walkerton Va
95 Morphin Anesthesia M M Moran Pinners Point Va
96 Specific Urethritis in the Male A. B Sinclair Charlottesville Va
97 Adenoids—Their Cause Effects and Treatment. J P Davidson Richmond Va
98 Pulmonary Tuberculosis Prophylaxis W A Plecker Hampton Va
99 Review of Puerperal Eclampsia W J Innes Brookneal Va
100 Collapsed Alæ Nasi and Its Correction D D Wilcox Lynchburg Va.
101 Significance and Treatment of Winter Colds O H Snider Atlanta Ga

Providence Medical Journal

January No 1

102 Present Status of Substitute Feeding of Infants with Practical Conclusions. I D Chebro Providence
103 Home Treatment of Tuberculosis by Class Method as Carried Out in Providence with Exhibition of Cases F T Fulton
104 Migraine H T Rogers Providence
105 Rabies—Origin Cause Symptoms Diagnosis and Treatment. I D Hadley Providence

Indiana Medical Journal, Indianapolis

January

106 Stomach Trouble T P Eastman I
107 Cornell University and Purdue U T Po
dianapolis

Journal of the South Carolina Medical Association, Greenville
January

108 Practical Methods in the Prevention of Malaria L. L Williams Baltimore
109 Traumatic Epilepsy and Its Treatment. A. J Buist, Charleston S C
110 Pneumonia G A Neuffer Abbeville S C

Southern California Practitioner, Los Angeles
January

111 Contribution of Ophthalmology to the Diagnosis of Arteriosclerosis A. L MacLeish Los Angeles
112 Berlin—Its Opportunities for Postgraduate Work D Fulton, Los Angeles.
113 Methods of Disinfection W W Roblee Riverside
114 Case of Primary Ocular Diphtheria F W Miller, Los Angeles
115 The Doctor and the Child G E Abbott Pasadena
116 Primary Carcinoma of the Bladder and Urethra in the Female D C Ball Santa Ana
117 Health and Development of School Children G L Leslie Los Angeles.

The American Practitioner and News, Louisville
January

118 The Orang Outang B Robinson Chicago
119 Diagnosis of Digestive Disorders J J Moren Louisville
120 Our Neglected Insane T P Satterwhite Louisville

Fort Wayne Journal-Magazine
January

121 Clinical Importance of Abdominal Pains in Relation to Intra thoracic Lesions B Van Sweringen Fort Wayne
122 Simple Elixir as a Vehicle in Prescriptions Intended for Children. E E Heffner, Lock Haven Pa

University of Pennsylvania Medical Bulletin, Philadelphia
January

123 Coxa Valga or Collum Valgum J K. Young
124 Roentgen Rays in Diseases of the Blood and Blood Forming Organs with Report of Cases H K. Pancoast, Philadelphia.
125 Primary Squamous Carcinoma of the Gall Bladder J Speese

Columbus Medical Journal, Columbus, Ohio
January

126 Parotiditis as a Complication in Pelvic Surgery E Lanphear St. Louis.
127 Is Materia Medica a Proper Subject for First Year Students? A J Girardot, Toledo
128 The Logical Place of Materia Medica in the Curriculum T Sollmann Cleveland

Central States Medical Monitor, Indianapolis
January

129 Newer Facts Concerning Phagocytosis the Opsonins L. W Famulener Bloomington
130 Pelvic Tuberculosis D Charles Summitville Ind
131 Rural Hygiene C L. Botkin, Farmland Ind.
132 Advantages of Knee Chest Position for Deep Urethral and Cystoscopic Examinations J E Morrow Indianapolis

Medical Fortnightly, St. Louis
January 25

133 Chronic Constipation and Its Treatment G F Butler Chicago
134 Exophthalmic Goiter H P Wilson Mediapolis Ia
135 Talks to Recent Graduates A L Benedict Buffalo

Annals of Gynecology and Pediatry, Boston.
January

136 Ectopic Pregnancy H F Quackenbos New York

St. Louis Courier of Medicine.
January

137 Looking Back—Résumé of Literature of 1906 E A. Babler St Louis

FOREIGN

Titles marked with an asterisk (*) are abstracted below Clinical lectures single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal
January 26

1 *Common Errors in the Diet and General Hygiene of Children. A. F Voelcker
2 *Postpartum Hemorrhage. J F LePage.
3 *Treatment of Myoma of the Uterus J F Jordan
4 *Cesarean Section in a Case of Contracted Pelvis with Twin Pregnancy G H Cowen
5 *Acute Illness Supervening During Menstruation T Holmes
6 *Obstructed Labor Due to Osteosarcoma of Pelvis M. B Ray
7 *Influence of an Excessive Meat Diet on Fertility and Lactation B P Watson
8 The Food Factor in the Twentieth Century G J Sealy
9 *Multiple Myeloma J R Charles and H H. Sanguinetti
10 Scurvy Occurring in a Diebetic W F Jones.
11 *Vaccination of the Cornea J A. Menzies and W E Jameson

1 Diet and Hygiene of Children.—Boelcker is emphatic in stating that unless physicians recognize what actually takes place in their patients when they are not under the doctor's eye they run a great risk not only of doing their patients little or no good, but they bring discredit on their art and fail, often quite deservedly, in their treatment He believes that at present there is a tendency on the part of physicians to pay too little attention to detail and to think too highly of diagnosis rather than of treatment The paper contains much valuable information on the diet, feeding and clothing of children, on ventilation, exercise, sleep and baths, for which the reader is referred to the original, as an abstract would necessitate the complete reproduction of the paper

2 Postpartum Hemorrhage.—LePage says a word in favor of compression of the abdominal aorta as a means of treating postpartum hemorrhage Having rendered any further serious hemorrhage impossible, the next step is to increase the volume and current of the blood and to assist uterine contraction This is done by raising the pelvis to cause the blood to gravitate toward the heart and brain, and to raise the arms and legs, bandaging them firmly to prevent the return of blood when they are lowered Ergot and other remedial means may then be used The uterus should be cleared of clots or retained portions of placenta.

3 Treatment of Myoma of Uterus.—Jordan favors abdominal hysterectomy because it enables the surgeon to do a thorough and careful operation, relieves him of unnecessary anxiety, gives the patient freedom from pain and insures an easy convalescence

4 Cesarean Section.—In the case reported by Cowen, Cesarean section was done at term after the os was dilated enough to admit two fingers Although the true conjugate was about three and one third inches, the largest diameter of the fetal head could not be made to enter the brim by pressure in various directions from above Twins were not suspected, being only found when the uterus was opened One interesting feature in the case was that the uterus would not contract properly until the deep sutures were tied The patient made an uneventful recovery

5 Acute Illness During Menstruation.—Holmes reports 6 cases of acute illness coming on during an apparently normal menstrual period In four of these cases a tumor was palpable over the ovary, and Holmes is of the opinion that hemorrhage from a Graafian follicle engorged with blood at the menstrual period may be the starting point of some of these cases, and that undue exertion might be the last factor in determining the rupture

6 Obstructed Labor.—Ray reports a case of mixed cell sarcoma of the sacrum and coccyx in which the tumor obstructed labor to such an extent as to necessitate surgical intervention The patient died from hemorrhage

7 Influence of Excessive Meat Diet on Reproduction.—The method of conducting the investigation made by Watson was as follows Twelve female rats and several males were put on a bread and milk diet, and the females were continued on this throughout pregnancy and lactation These served as the controls Seventeen females and five males were put on an ox flesh diet, but were otherwise under exactly the same conditions as the animals given bread and milk The animals were begun on a meat diet at various ages, from the second up to the fourth month, and some of them were kept on the diet for as long as five months Of the 17 animals fed on a meat diet only 8 became pregnant, and of these 4 bore young within 21 days (the usual gestation period in the rat) of being put on the diet, so that only 4 actually conceived while on meat feeding Of these latter one had been 24, one 25, one 27 and one 30 days on an exclusive ox flesh regimen The other 9 animals, although kept for several months, did not conceive, and this in spite of the fact that they were seen to copulate freely right up to the end of the experiment Of the 12 animals fed on a bread and milk diet all became pregnant and had young, so that we may conclude that a meat diet is decidedly prejudicial to the occurrence of pregnancy in rats when the diet is begun when the animals are from two to four months old As a result of these experiments Watson is convinced that a meat diet in rats affects prejudicially their powers of reproduction, as well as lactation, and these results suggest to him that the increasing consumption of animal food in Great Britain may be an important factor in the causation of the

decrease in the birth rate and the diminished powers of lactation

9 **Multiple Myeloma**—Charles and Sanguinetti report a case of multiple myeloma occurring in a man aged 72, in which no myelopathic albumosuria was present on the occasions when the urine was examined for this purpose The patient died and the findings of a very carefully done postmortem are reported in full

11 **Vaccination of Cornea.**—Menzies and Jameson report an instance of accidental vaccination of the cornea occurring in one of them (J) following the breaking of a tube of lymph, a fragment of the tube striking the eye The corneal lesion manifested itself on the following day It persisted for about five weeks, recovery being retarded by the occurrence of a secondary ulceration

The Lancet, London.
January 26

12 *Erythema Nodosum and Rheumatism J O Symes
13 Spirillum Fever in Uganda R U Moffat
14 Roentgen Rays in the Treatment of Carcinoma and Sarcoma C Williams
15 *Two Cases of Traumatic Rupture of the Kidney in one of which a Single Kidney Existed J G Andrew
16 *New Test for Sugar H J H Fenton
17 Induction of Autovaccination in Tuberculosis and Other Chronic Glandular Infections by the Roentgen Rays H D McCulloch.
18 *Tracheotomy in Slight Respiratory Obstruction Associated with Febrile Toxemia. A O Bisson
19 *Glandular Extract from Immunized Animals as a Curative Agent in Plague S Mallannah

12 **Erythema Nodosum and Rheumatism**—Symes is of the opinion that there is much to support the view that erythema nodosum is a specific acute febrile disorder, that infection takes place through the tonsils or lungs, that after a prolonged incubation period and period of prodromal symptoms a specific rash appears, and that convalescence is accompanied by profound anemia and malaise, but, he says, the evidence of a relationship between an erythema nodosum and rheumatism is of a conflicting nature

15 **Traumatic Rupture of Kidney**—The two cases reported by Andrew resemble each other in the following points 1, Both patients fell on the loin, 2, the injury in both cases was direct—one a fall on the edge of a stair the other on the edge of a pail, 3, in both blood was present in the urine immediately after the accident, 4 in both the ruptured kidney could be felt by palpation, in each case extending round the abdomen toward the umbilicus and tender to touch, and 5, in both the swelling was clearly behind the peritoneum

16 **Test for Sugar**—The new test for sugar described by Fenton is said to be sufficiently delicate to detect 0.2 per cent. or less of sugar in any liquid For the examination of urine the test is most conveniently applied in the following way

Pour a small quantity (4 or 5 c.c) of the liquid on to an excess of solid anhydrous calcium chlorid so as to form a semisolid or pasty mass Add to this 10 c c of toluene containing two or three drops of phosphorous tribromid and then carefully boil the mixture for a few minutes bearing in mind the inflammable nature of toluene Pour off the toluene solution and after cooling add to it about 1 c.c. of malonic ester and a little alcohol On neutralizing the mixture by adding alcoholic potash drop by drop a characteristic pink color will usually be observed. The mixture is now considerably diluted with alcohol and a few drops of water when if sugar was originally present, the solution will exhibit a beautiful blue flourescence

The reaction appears to be a specific one for carbohydrates which contain six or more atoms of carbon in the molecule and may therefore be used to distinguish hexoses from pentoses or other lower sugars

18 **Tracheotomy in Slight Respiratory Obstruction.**—In reviewing the cases described by Bisson it appears that in all of them the operation was beneficial In the greater number the benefit proved only temporary but there were cases in which the patient's life was saved Most of the patients who died were very young

19 **Glandular Extract in Plague.**—Mallannah records the results obtained from the use of glandular extract from immunized animals as a curative agent in plague The various stages of his experiments are detailed in full, and the results are very encouraging

Tropical Medicine and Hygiene, London.
January 1

20 Oriental Sores Leishman Bodies Incubation Period of Five Months. J Manson
21 Paquinine—Its Suggested Use in Blackwater Fever W Hartigan
22 Bihimbo Disease—The Nature of This Disease Met in Chaka District of the Uganda Protectorate A G Bagshawe
23 *House Sanitation* D Cooper

The Practitioner, London
January 1907

24 Influenza T C Allbutt.
25 Clinical Aspects of Influenza P D Powell
26 *Therapeutics and Prophylaxis of Influenza by Quinin W Broadbent
27 *A Possible Source of Influenza D Duckworth
28 *Thoughts on Influenza. J Moore
29 General Considerations on Influenza S West
30 *Respiratory Complications of Influenza H Mackenzie
31 *Influenza as It Affects the Nose and Throat St C Thomson.
32 *Influenza in Relation to the Digestive Organs N Dalton
33 Influenza and Appendicitis D Armour
34 Cardiac Complications of Influenza J Cowan
35 The Nervous System in Influenza. W Harris
36 The Psychoses of Influenza T C Shaw
37 Ocular Manifestations Accompanying Influenza H W Lyle
38 Aural Complications of Influenza A. H Cheatle
39 Micro organisms of Influenza W d E Emery
40 *Influenza from a Public Standpoint A. Newsholme

26 **Quinin in Influenza**—Broadbent considers quinin the best remedy in influenza As a prophylactic he gives two grains every morning during the prevalence of the epidemic For the cure of the patient his usual prescription is one dram of ammoniated quinin and two drams of liquor ammonie acetatis every hour, for three hours, and then every four hours In the fulminating attacks of influenza in which the patient has become comatose, he states that hydrobromate of quinin given hypodermically in large doses completely relieves the unconsciousness

27 **Possible Source of Influenza.**—Duckworth thinks that imperfectly ventilated rooms in hotels and elsewhere, and sleeping berths on trains, may be possible sources of influenza. Effective disinfection of the furniture, curtains and blankets in such rooms or sleeping cars would materially diminish the risk of infection

28 **Treatment of Influenza**—For the distressing rheumatoid or neuralgic pains of influenza Moore recommends a combination of salicylate of sodium with granular effervescent citrate of caffein, or phenacetin, 3 to 5 grains, tincture of gelsemium, 5 minims, and chloroform water, one half ounce

30 **Respiratory Complications of Influenza**—When the cough is dry and paroxysmal, Mackenzie gives heroin hydrochlorid in doses of from 1/36 to 1/12 of a grain at intervals of from one to two hours When the cough is frequent and severe he employs the following

℞	Morphinæ hydrochlor	gr ⅙	03
	Apomorphinæ hydrochlor	gr ¼	045
	Acidi hydrochlor dil	m xx	1 25
	Syr pruni virginianæ	ʒss	15
	Aquæ	ʒii	60

Ft hmct Sig One teaspoonful as necessary

When there is bronchitis a mixture containing citrate of ammonia citrate of potash and ipecacuanha wine is useful

℞	Liq ammonii citratis	ʒiss	6
	Potassii citratis	gr xv	1
	Vini ipecacuanhæ	m v	3
	Aquæ	ʒi	30

Sig One teaspoonful three times a day

31 **Cough in Influenza.**—Thomson prescribes the following for so called "stomach coughs" frequently seen in cases of influenza

℞	Acidi hydrochlor dil		
	Acidi nitrici dil āā	ʒss	2
	Glycerini	ʒss	15
	Infusi quassiæ	ʒvi	180

M Sig A tablespoonful in a wineglassful of water three times a day

32 **Influenza and Digestive Organs.**—Dalton says that the treatment of influenza of the gastrointestinal tract must be expectant Strong measures should be avoided Antipyretics and purgatives must be used with caution Intestinal antiseptics should be tried and cardiac stimulants will be needed

40 **Influenza from Public Health Standpoint**—Newsholme says that it does not appear likely that any relation of influenza patients on a sufficient[illegible] to influence the result can ever be enforced because the [illegible] incubation is short, [illegible] stage before its [illegible]

cult, and many cases are so extremely mild that the patient is not obliged to remain indoors. He says that disinfection of invaded houses does not appear to be required. The contagion of influenza is very short lived.

Bulletin de l'Académie de Médecine, Paris.

41 (LXX, No. 44, pp. 609-634.) Distribution of Phosphorus in Food. (Phosphore dans les aliments.) Balland.
42 *Etiology and Prophylaxis of Malaria. (Paludisme.) Kelsch.
43 (LXXI, Nos. 1-2, Pp. 1-102.) Bacillary Dysentery and Abscess in Liver. (Dys. bac. et abcès du foie.) L. E. Bertrand.
44 *Sanitary Defense of Paris. (Défense sanitaire.) A. J. Martin.
45 *Inflammatory Tuberculosis and Arthritism. (Les arthritiques ou prétendus tels ne sont souvent que des tuberculeux.) A. Poncet and R. Leriche.
46 Contagion and Endemic Diseases in the French Colonies, 1905. (Maladies endémiques, etc.) Kermorgant.
47 *Statistics of Amputations of Breast for Cancer. (Cancer épithélial du sein.) Le Dentu.

42 Prophylaxis of Malaria.—Kelsch presents a number of arguments against ascribing too exclusive etiologic importance to the mosquito in respect to malaria.

44 Sanitary Defense of Paris.—Martin reviews the work done in 1905 by the disinfection and vaccination services and the like in Paris. There are four disinfecting stations, and disinfection was done at the house or station in 58,470 cases. The death rate has fallen from 22.33 per 1,000 inhabitants in 1892 to 17.4 in 1905. There were 2,694 less deaths from the transmissible diseases in 1905 than in 1892.

45 Unrecognized Tuberculosis in Arthritics.—Poncet and Leriche discuss the affections due to sluggishness in the nutritional processes. Any cause acting for a long time may slowly produce and even fasten on the offspring this sluggishness in the nutritional processes, they say. Any latent infection or intoxication may gradually modify the soil and induce this sluggishness in the nutritional processes, which is called, for want of a more accurate term, the "arthritic" or "rheumatic" tendency. The diplococcus of rheumatism, intestinal autoinfection and the tubercle bacillus are all liable to transform, in time, a healthy soil into arthritic soil. The lesions and affections called arthritic are frequently merely the expression of mild local tuberculosis, which in time vaccinate the soil against malignant tuberculosis. The tuberculous should be divided into two classes—patients with classic, active tuberculosis, specific from the standpoint of pathologic anatomy, and fatal in the course of a few months or years, and secondly, patients with non specific tuberculosis, in whom the inflammatory tuberculosis induces merely an ordinary inflammatory reaction in the tissues—primary hyperemia, secondary inflammation and final sclerosis. They classify them as *les grands tuberculeux* and *les petits tuberculeux*.

47 Survival After Removal of Mammary Cancer.—Le Dentu says that 10 patients on whom he operated for epithelial mammary cancer from six to nineteen years ago are in good health to date. Seven others in the same group survived from three to sixteen years. Twenty others survived from five months to nearly fourteen years, and three in this group succumbed to intercurrent affections. These figures are the record of 53 private patients with mammary cancer, confirmed by the microscope, on whom he has operated.

Presse Médicale, Paris.

48 (XV, Nos. 1-2, pp. 1-16.) Technic of Applying Ions in Therapeutics. (Thérapeutique ionique.) P. Desfosses and A. Martinet.
49 Rational Use of Tarnier Retractor. (Ecarteur Tarnier.) C. Jeannin.
50 *Diagnosis of Tuberculosis of Genitourinary Apparatus from Microscopic Examination of Urine. (Diag. de la tub. de l'appareil gén. urin.) J. Moscou.
51 *Therapeutic Influence of Air in Rapid Traveling. (Influence de la course rapide.) L. Bakaleinik.
52 Karyogamy as Theory of Origin of Cancer. (Pathogenie du cancer. Théorie karyogamique.) L. Hallion.
53 Etiology and Pathogenesis of Nutmeg Liver. (Foie muscadé.) L. Gérandel.
54 *Prevention of Hematoma in Operating on the Scrotum. (Capitonnage dans les op. sur les bourses.) R. Siegel.
55 (Nos. 3-4, pp. 17-32.) Stenosis and Atresia of the Cervix in Multiparæ. (Sténose et atrésie du col chez des femmes ayant eu des enfants.) F. Jayle.
56 *Hygiene of the Staircase. (Hygiène de l'escalier.) A. A. Rey.
57 *Teaching the Tuberculous not to Cough. (Procédé du pointage des quintes.) C. Mantoux.
58 *Rectifications in Regard to the Aphasia Question. (Aphasie.) P. Marie.
59 Antityphoid Serum. (Sérum antityphique.) A. Rodet and Lagriffoul.
60 Importance of Examination of the Mouth in Case of Dubious Syphilis. (Examen de la bouche.) L. M. Pautrier.

50 Microscopic Examination of Tuberculous Urine in Case of Genitourinary Tuberculosis.—Moscou confirms Colombini's statements in regard to the frequent presence of misshapen leucocytes in the urine in case of a tuberculous lesion in the genitourinary apparatus. The leucocytes obtained by centrifugation are irregular in shape, indented, with the protoplasm outlined by small transparent bullæ. It is impossible to distinguish the nucleus and the granulations in leucocytes thus deformed. These findings were constant in 18 out of the 22 tuberculous patients examined, but in the four other cases of unmistakable tuberculosis the leucocytes were apparently normal. Two other patients with gonorrhea or urinary calculi also presented the same changes in the shape of the leucocytes. The finding is not pathognomonic for tuberculosis, but may be useful as an accessory sign. Moscou also found that by modifying the medium the leucocytes resumed their normal appearance.

51 Influence on the Organism of Rapid Passage Through the Air.—Bakaleinik had occasion to take long trips on the Siberian Railroad and made a practice of riding on the front of the engine. He found by tests on himself and others that the extraordinary aëration of the lungs thus induced stimulated the metabolic processes and improved the general health. He advised a patient with apical tuberculosis to try it, and after 33 days spent in traveling on the locomotive, plus 45 days on a steamer, keeping all day in the prow, the patient is apparently entirely cured. He had previously taken the fresh air cure, etc., for months without benefit.

54 To Secure Prompt Healing After Operations on the Scrotum.—Siegel prevents the development of a hematoma after operations on the scrotum by applying the lips of the incision together, face to face, drawing them up above the surface of the scrotum, thus obliterating the entire cavity left after the operation. The walls applied face to face to the depth of the pre-existing cavity are fastened together by a row of U shaped sutures taken through both, at the base of the projecting portion, close to the surface of the rest of the scrotum. Each of these stitches is tied over a small roll of gauze on each side. The lips of the wound are then sutured together as usual, and the U stitches are removed after the parts are healed, when the skin readily slides back into place. The article is illustrated.

56 Hygiene of the Staircase.—Rey refers to the staircase in large flat buildings, and shows how dark, unventilated staircases can be done away with. His plan is a logical sequence of his other proposals for the hygiene of houses, some of which have been mentioned recently in these columns. Instead of a dark, central court he would have the building in two or more parts, with a court running entirely through between them, thus ensuring light and air without loss of any more ground space. The staircase, he claims, should be built in this open court, not in the building proper. He also suggests that the steps should be cut rounding and thus narrower at the sides, to make them easier for children.

57 Education in Regard to Coughing.—Mantoux has found that an effectual means of suppressing useless coughing is to instruct patients in its uselessness and harmfulness, and then to have them note down on a sheet of paper every time they cough. He calls for the record at each visit, and it is astonishing, he says, how soon they learn to conquer the impulse to cough rather than have a long record to show him.

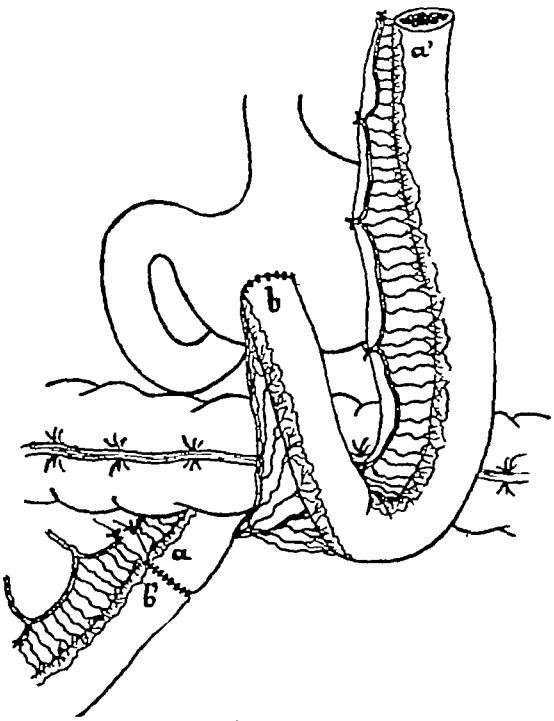
58 Rectifications in Regard to the Question of Aphasia.—Marie here replies to some articles published recently by Dejerine in the *Presse Méd.*, presenting arguments against the new views advanced by Marie. He takes up these arguments in turn and states that the data cited are directly confirmatory of his views, although Dejerine tortures them to make them say the contrary of what they really mean.

Semaine Médicale, Paris.

61 (XXVII, No. 3, pp. 25-36.) *Pathogenesis of Congenital Icterus in Adults. (Ict. cong. de l'adulte.) A. Chauffard.
62 (No. 4, pp. 37-48.) *Esophago-jejunogastrostomosis to Remedy Impassible Stricture of the Esophagus. (Nouvelle opération pour rétrécissement infranchissable de l'œsophage.) Roux.
63 *Action of Dechloridation on Bradycardia and its Interpretation according to the Myogenic Theory. (Action de la déchloruration sur le pouls lent permanent.) E. Enriquez and J. Ambard.

61 Congenital Icterus in the Adult.—Chauffard sifts the literature on this subject and reports the details of a case in which a young man exhibited icterus without being actually sick, *without choluria or enlargement of the liver or gall bladder*, while the stools showed the presence of bile, the urine of urobilin, and the spleen was much enlarged and fibrous The persistent icterus was noted the day after birth, and, as the child grew, it became aggravated by fatigue. The diet did not seem to influence it Chauffard regards the case as one of hemolytic icterus, the blood corpuscles having little resisting power, as he determined by various tests The primordial and predominant rôle in the whole syndrome is played by the enlarged spleen He, therefore, asks for recognition of congenital icterus in the adult from spleno hemolysis as a separate morbid entity

62 Isolated Loop of the Jejunum to Connect Esophagus and Stomach.—Roux reports a case in which this operation was successfully performed in his clinic at Lausanne Tavel suggested some time ago that a piece of small intestine might be used for the purpose, and Roux was intending to experiment on animals when chance brought to the clinic recently a child with impassable stricture of the esophagus from the action of a caustic As permanent relief was necessary, instead of merely making a gastric fistula, the upper part of the jejunum was mobilized, the connecting arteries ligated and severed, and the proximal end of the isolated loop was brought up through a subcutaneous passage to the neck, while the distal end was implanted in the anterior wall of the stomach The stumps left in the jejunum after resection of this portion were united with a Murphy button The isolated loop was cut considerably longer than the distance between the stomach and neck to allow for a sag in the loop as it entered the stomach, the arteries on this sag being left undisturbed It thus served as a vascularized pedicle for the isolated piece of intestine The technic is shown in detail in five illustrations one of which is reproduced In order to leave the intestine at rest, so far as possible, to allow it to grow to the subcutaneous passage, the esophagus sound was introduced and the upper end of the isolated loop, projecting from the incision in the neck, was tied around the sound and sutured to the skin just below The fascia of the rectus was hollowed out a little to make room for the sagging lower end of the loop, and the epigastric incision was then sutured At date of writing the wounds have healed the child has grown stronger and is up and about, and the isolated loop can be seen contracting vigorously at times Very little mucus emerges from the orifice, and there is no regurgitation of stomach content. Peristalsis seems to be normal Solid food introduced is passed rapidly along and disappears in the abdomen, apparently tolerated as well as if not better than fluid food.



Esophago jejuno gastrostomosis

63 Action of Deprivation of Salt on Habitual Slow Pulse.—Enriquez and Ambard report the case of a woman of 57 with pulse rate from 32 to 39 and arterial tension 23 cm on the Potain sphygmomanometer The patient complained of pains in the knees, dyspnea and dizziness during exertion. No treatment was instituted except banishing salt from the diet In a week the dyspnea and dizziness had much subsided and by the end of seven weeks the pulse rate was 72, all symptoms had vanished and the patient had gained nearly 15 pounds in weight This beneficial action of dechloridation on habitual slow pulse was observed likewise in a case reported last year by G Brouardel and in another, unpublished, case of Weill Hallé Huchard has also reported a case in which the pulse rate increased on a milk diet and grew slow again when a mixed diet was resumed. This observer has long emphasized the importance of the cardio renal synergy in the syndrome of the habitual slow pulse and advised an exclusive milk diet, as nephritis is very apt to complicate the cardiac trouble, and the milk diet wards off uremia. If the pulse rate increases on it, he regards this as a favorable consequence of the diuresis on the heart action Enriquez and Ambard discuss whether the modification of bradycardia by deprivation of salt harmonizes with the new assumptions in regard to the functions of the bundle of His They review a number of recent works in this line, especially those of Carlson Meek Lillie Castaigne and Achard showing the injurious action of solutions of salt on the cells in the test tube and in the living subject This toxicity may be partially due to osmosis, but it seems to be principally a directly injurious action independent of the innervation The effects of dechloridation in case of habitual slow pulse harmonize perfectly with these data, and analysis of the pathogenic conditions of the pulse reveals the curious and hitherto unique spectacle of the injurious action of the chlorids on a diseased muscle without any intermediation on the part of the nervous system It demonstrates anew, they declare, the hypersensitiveness to the chlorids of the various tissues of the organism in the course of nephritis In the case described the heart action passed through different phases of arrhythmia as the pulse rate gradually increased duplicating in reverse order the phenomena noted by Erlanger as the result of compression of the bundle of His The case further confirms Vaquez' assumption that many cases of arrhythmia are merely the consequence of a lesion in the myocardium severe enough to induce bradycardia, but not sufficiently serious to modify objectively the heart rhythm

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64 (L. No. 2 pp. 465-615.) *Loco Incarceration of Intestine in Hernia (Die schlaffe Darmeinklemmung bei Hernien.) Wilms

65 * Spontaneous Rupture of Rectum (Sogenannte Spontan Rupturen des Rectums.) H Heinke

66 *Injuries and Suture of Heart. (Herzverletzungen und Herznaht.) C. Sultan.

67 *Pulmonary Complications after Abdominal Operations (Lungen Komplikationen nach Bauch Operationen.) A Löwen

68 Chronic Rheumatic Lymphangitis (Eine besondere Art von Schmerzen am Unterschenkel und Fuss.) Wilms

69 *Treatment of Complicated Fractures (Komplicierte Frakturen.) H Pimann

70 Suppuration in Gouty Joints (Gelenkeiterung bei Gicht.) A. Löwen.

71 Cure of Portal Ascites by Omentopexy (Ascites infolge Pfortader Kompression geheilt durch die Talma sche Operation.) H Meyer

72 Tendon Covering for Diaphysis Stumps (Amputation mit Sehnendeckung zur Ermöglichung tragfähiger Diaphysenstümpfe nach Wilms.) R. Sievers

73 Meningeal Hemorrhages (Zur Kasuistik der Meningealblutungen.) J Sommer

74 *Local Action of New Anesthetics on Motor Nerve Trunks (Vergleichende experimentelle Untersuchungen über die örtliche Wirkung einiger neuer Lokal Anästhetica Stovain Novokain und Alypin auf motorische Nervenstämme.) A. Löwen

75 *Spinal Anesthesia, By Effects and After Effects (Lumbal Anasthesie mit Stovain und Novokain mit bes Berück sichtigung der Neben und Nachwirkungen) H Heineke and A. Läwen.

64 Loose Incarceration of Intestine in Hernia.—In elderly persons incarceration of a loop of the intestine is liable not to entail such severe symptoms as in younger patients The size of the opening into the hernia has some influence, but the difference is mainly due to the lesser blood pressure in elderly individuals The less the blood pressure the less serious the symptoms In a case of compensated mitral stenosis the incarceration had lasted for eight days without entailing gangrene In other cases in elderly persons the incarceration had lasted for five or six days without irreparable injury before the operation

65 Spontaneous Rupture of the Rectum.—Heineke reviews the cases on record of rupture of the rectum without external violence, merely from exaggerated straining at stool It has been observed hitherto only in women, or when the parts were the seat of some previous morbid process, or the floor of the pelvis was much relaxed In a case personally observed, the rectum ruptured at a point 17 cm above the anus, while the man was lifting a heavy weight After 21 hours of peritonitic symptoms the abdomen was opened, but the collapse persisted so threatening that the operation was discontinued

66 Injuries and Operative Treatment of the Heart.—Sultan reports a number of cases of trauma affecting the heart, including two in which this organ had to be sutured. One of the latter patients recovered In case of diagnosis of injury to the heart and evidences of hemorrhage into the thorax he advises opening the thorax at once, incising in such a way that the incision can be extended to make a square flap to allow access to the heart at need The effort to operate without opening the pleura, he thinks, is more theoretical than justified by facts as, in the majority of cases, pneumothorax accompanies the heart injury He advises refraining from drainage owing to the danger of superposed infection

67 Lung Complications After Abdominal Operations.—Läwen states that the experiences at Leipsic confirm the theory that the larger proportion of pulmonary complications occur after operations above the umbilicus rather than after those in the lower half of the abdomen Postoperative pneumonia was observed in 180 out of 9 755 patients operated on since 1895, with an average mortality of 65 per cent In about a quarter of the cases the pneumonia was due to aspiration *Carcinomatous cachexia affords an unmistakable predisposition to lung complications* Pneumonia was observed only once after operations on the gall bladder, while it occurred in 36 per cent of the gastrostomies on account of cancer, and in 6 6 per cent of the 91 cases of resection of the stomach Appendicitis and complicating peritonitis were responsible for 34 cases of pneumonia in 399 operations Aspiration during the anesthesia is the usual cause, a tendency to thrombosis and embolism of the lungs being comparatively rare

69 Treatment of Compound Fractures.—Rimann states that Trendelenburg aims to transform a compound into a simple fracture at once by closing the wound, and his mortality is scarcely half so high as that at other clinics where this principle is not followed The tabulated results show a mortality of 3 7 per cent of 238 cases of compound fracture treated in the clinic. The number of after amputations is also less in proportion while the patients were dismissed cured in two thirds of the time required by other technics The fractures were the result of impalement in 72 cases of being run over by a wagon in 42 of crushing by a weight in 27, of injury in a machine in 15 of a kick from a horse in 14, and of a fall in 32 In 15 2 per cent it was found possible to close the wound at once by a flap while in 11 5 per cent a pedunculated flap had to be used and in 9 cases a bridge In 13 cases septic phenomena made extensive incisions and drainage necessary The total list includes 12 fractures of a joint, 2 of the knee, 3 of the elbow and 7 of the ankle

74 and 75 Spinal Anesthesia.—The experimental Roderich and clinical experiences reported do not confirm case of Dublon Pautrier to the harmlessness of this method of anesthesia with stovain, novocain or alypin, with or without addition of a suprarenal preparation.

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76 (XXXIII No 48 pp 1265 1296) Technic of Plastic Operation on Tendons for Lax Paralytic Talipes Equinus (Sehnenplastik beim schlaff paralytischen Spitzfuss) S Kofmann
77 Support for Pelvis (Beckenstützе) E Schultze
78 (No 49 pp 1297 1320) *Plastic Operation on Peritoneum with Isolated Pieces of Omentum (Peritonealplastik mit isol Netzstücken) C Springer
79 Total Dorsal Dislocation of Wrist and of the Tarso Metatarso Articulation (2 seltene Luxationen) W v Brunn
80 (No 50 pp 1321 1344) Partial Resection of Spermatic Cord in Radical Operation for Inguinal Hernia. (Part Resektion des Samenstrangs bei Op des Leistenbruches) Z Slawinski.
81 *Incision in the Side of the Neck for Removal of Foreign Bodies in the Esophagus without Opening the Latter (Trachelotomia externa) F Franke.
82 (No 51 pp 1345 1376) *Technic of Treatment of Fistula (Fistelbehandlung) V E Mertens
83 Benzin Iodin Catgut. (Benzin Iodcatgut.) Mindes

78 Plastic Operations on the Peritoneum with Isolated Pieces of Omentum.—Springer does not believe that isolated pieces of omentum are practicable for plastic operations on the peritoneum, as his extensive experimental work with dogs has shown that adhesions are liable to develop, with other drawbacks

81 Removal of Foreign Bodies from Unopened Esophagus.—Franke made an incision in the side of the neck under chloroform and was then able to manipulate upward and remove through the mouth a set of false teeth which the patient had swallowed It had lodged just below the larynx In looking over the literature he has found only two cases in which this technic was followed, and yet in 366 cases of esophagotomy on record he is sure that in many instances it would have proved equally effectual, and have made the esophagotomy unnecessary

82 Aspiration Treatment of Fistulas.—Mertens reports excellent results in the cure of persisting postoperative or traumatic fistulas under aspiration with the Bier suction apparatus He relates a few instances of the cure, among others, in seven days of a fistula which had persisted for seven weeks without displaying any tendency to heal In other cases the lack of any tendency toward healing under aspiration treatment for a few days justified the assumption of a foreign body lurking in the depths of the fistula, this was found and removed, after which the fistula rapidly healed He applies the suction apparatus with its full force from the first, inducing the maximal aspiration of which it is capable *This sudden aspiration of blood to the region fills the blood vessels, tears the torpid granulations and thus freshens the entire surface of the fistula* Blood exudes until several cubic centimeters of blood have accumulated in the aspirating bell After this the force of the aspiration is reduced and the apparatus is left in place for about 45 minutes as usual The bleeding gradually subsides and at last only a little serum is aspirated The same procedure is repeated on the two following days, and by the end of a week the fistula is generally completely healed

Deutsche medizinische Wochenschrift, Berlin and Leipsic.

84 (XXXIII No 1 pp 1-48) Tendon Tumors in Children (Sehnengeschwülstchen) Pels-Leusden
85 *Treatment of Pleurisy with Effusion (Exsudative Pleuritis) A Fraenkel Clinical lecture.
86 *Chronic Tuberculous Meningo encephalitis from Clinical and Forensic Standpoint. (Chron Men-enceph tub) F Landois
87 *Influence of Thyroid Gland on Development of Embryos (Schilddrüse und Entwicklung des Embryos) M Bleibtreu
88 Mechanical Action on Organism of Lowering of Atmospheric Pressure (Mech Wirkungen der Luftdruckerniedrigung auf den Organismus) C Jacobj
89 Auditory and Motor Optic Sequelæ of Convulsions (Folgeerscheinungen nach Krampfanfällen) A. Eick
90 *Injuries from Roentgen Treatment. (Roentgenschädigungen in der medizinischen Radiotherapie) K. Engel
91 Case of Paraurethral Gonorrhea (Histologie der chronischen Gonorrhöe) P Cohn
92 Harmfulness of Coffee (Schädlichkeit des Kaffees) H Harnack.
93 Regulations Admitting Physicians to Practice in Foreign Lands (Zulassung zur ärztlichen Praxis im Auslande) J Schwalbe
94 (No 2 pp 49 88) *Influence of Roentgen Rays on Albumin Metabolism in Exophthalmic Goiter (Eiweissumsatz bei der Basedowschen Krankheit) C. Rüdinger
95 *Report of German Sleeping Sickness Commission (Expedition zur Erforschung der Schlafkrankheit) R Koch

96 Study of Hexamethylenamin and Its Salts (Hex und seine Salze-Cystopurin.) P. Bergell. Id. O. E. Loose.
97 *Diseases Simulating Typhoid Fever (Typusähnliche Erkrankungen.) Jürgens. (Commenced in No. 1.)
98 *Internal Treatment of Appendicitis (Int. Behandlung der App.) M. Pfister.
99 Case of Glycosuria after Subsidence of a Goiter (Glyk. nach Kropfschwund.) Boldt.
100 Simplification of the Heller Ring Test. (Hellerschen Ring probe.) F. Sachs.
101 Epidemic Cerebrospinal Meningitis Two Hundred Years Ago (Genickstarre vor 200 Jahre.) Radmann.

85 Treatment of Pleurisy with Effusion.—Fraenkel remarks that he has scarcely ever witnessed any benefit from the salicylates in pleural inflammation, but that their use is always indicated when there is a suspicion of a rheumatic basis. He pays tribute to Bowditch as the pioneer in the line of thoracentesis with aspiration, and advises puncturing in the fourth interspace on the right side and in the fifth on the left, between the maxillary and front axillary lines, with the patient reclining in case of a large effusion. If the effusion does not extend so high, the trocar must be introduced in the back, as high as possible so that the cannula will not interfere with the diaphragm. If respiration is much impeded, the patient should sit, the arm of the sound side hanging over the back of the chair, and the arm on the affected side raised or, still better, the hand placed on the shoulder of the sound side. He recommends administration of 0.005 or 0.01 gm. morphin hydrochlorate immediately before puncturing to suppress coughing. He advises never to withdraw more than 2 or 2.5 liters at a time, and to stop at once if the patient has an uncontrollable cough or complains of pain in the chest, or if the pulse grows weak. If aspiration is continued after a warning of this kind there is a likelihood of incipient pulmonary edema with "albuminous expectoration." After the puncture is the time when diuretics and "drugless" measures to promote the absorption of the effusion prove their usefulness. Fraenkel gives powerful diuretics at this time, and small doses of digitalis or strophanthus if the heart requires a tonic. He also applies revulsion, painting the affected side with tincture of iodin or rubbing in a piece of iodin salve the size of a walnut. (Tinct. iodin, 0.1 gm., potassium iodid, 2 gm., and green soap and lanolin, each 10 gm.) The salve is especially useful in case of tuberculous pleurisy. The contraindications for puncture are few, ulcerative processes in the lungs, of course, impose caution. In case of cancerous degeneration of the pleura the aspiration may cause great pain, dyspnea or a tendency to hemorrhage, and the procedure must be abandoned or only small amounts of fluid withdrawn at a time. Systematic respiratory exercises are useful after the effusion has entirely vanished, to stretch the forming adhesions. The patients should be instructed to take from five to ten deep breaths every hour or so, and also to exercise the trunk by twisting it on its axis, bending sideways, raising the arms above the head, etc., with, later, cautious mountain climbing.

86 Curability of Chronic Meningoencephalitis.—Landois relates a case of chronic tuberculous meningoencephalitis in which the nodules shriveled by a cicatricial process, without cheesy degeneration. A permanent cure was at hand, when the patient met with a traumatism affecting his head, which whipped up the chronic, almost extinguished process into a fatal exacerbation.

87 Influence of Thyroid Treatment on Development of Rabbit Embryo.—Bleibtreu reports experiments which demonstrate, he thinks, that in gravid rabbits under thyroid treatment the tendency is toward arrest of gestation and reabsorption of the fetus. The disturbances in gestation observed closely resemble those seen when gravid rabbits are exposed to the Roentgen rays or are injected with cholin.

90 Roentgen Injuries in Medical Radiotherapy.—Engel writes from Koranyi's clinic at Budapest to discuss some of the by-effects of radiotherapy as reported in the literature and as personally observed. In some cases violent suffocation was observed after exposure of a cancer in the mediastinum, or general weakness and nausea. These functional disturbances he explains as probably of psychic origin. A papulous exanthem with high intermittent fever has been sometimes observed, with slight subjective symptoms, the syndrome being due, probably, to toxins formed by the destruction of tissue as it preceded exfoliation. The prognosis is favorable. The action of toxins liberated by the exposures is probably also the cause of the fever noted in Roentgen treatment of leukemia and pseudoleukemia. In a personal case of leukemia reported, intense toxemia developed after 350 minutes of exposures in the course of 11 days. The patient was a man of 54, with enlarged glands and spleen, 2,223,000 red and 246,000 white corpuscles, the general condition was good. The spleen, the neck and the axilla on both sides were exposed to a hard tube for five minutes each daily. The reds dropped to 1,000,000, the whites to 110,000, but the exposures were continued until the figures were respectively 1,620,000 and 55,000, and treatment was suspended. The general condition rapidly deteriorated with weakness of the heart and diarrhea, and the patient soon succumbed. As the leukemia before treatment had shown a chronic tendency, the rapid deterioration under the treatment can be explained only by toxemia. There was no dermatitis. Krause has reported a case in which exposures up to 3,650 minutes had been given without harm. Schenck has also reported a case of rapid deterioration under Roentgen treatment of a febrile leukemia. Engel summarizes the cases of sudden death that have been published as occurring after a course of Roentgen treatment. To prevent all such mishaps he declares that no exposure should last more than two minutes, and the tube should not be nearer than 20 cm., or four minutes with the tube 35 cm. distant. The same surface should not be exposed more than twice or three times on the same day, and the exposed surface should be protected with tin foil and the vicinity with sheets of lead. The patient's susceptibility should be ascertained by tentative, brief, mild exposures at first, and the region exposed should be of small extent. After five or six exposures this treatment should be suspended for a week, during which time the blood picture should be carefully supervised. At the slightest indication of an undesired by-effect the exposures should be suspended and not resumed for a long time. In case of symptomatic improvement, treatment should be suspended at once, and the patient kept for a time under strict control.

94 Roentgen Treatment of Exophthalmic Goiter.—Rudinger concludes his study of the albumin metabolism under Roentgen exposures in two cases of exophthalmic goiter, with the advice to make a single tentative exposure of the thyroid in every case. The results may justify further treatment in this line, he says, especially if the previously abnormally increased breaking down of albumin is replaced by retention of nitrogen after the exposure, as in his cases.

95 Report of German Sleeping Sickness Expedition.—Koch confirms in this latest installment of his report the facts presented in previous installments, summarized in THE JOURNAL recently on page 49. A town has grown up around the camp of the party, huts and barracks erected by the natives for the sick, who flock to them for relief, 980 were under treatment at the date of writing. Koch finds the trypanosomes so constantly in examining the glands that he regards this finding as of the utmost importance not only for the diagnosis but also as an index of the influence of the medication. Even in the 195 apparently almost moribund cases a number of the patients have been so much improved that consciousness has returned, they have regained control of their sphincters, and are able to walk without help. In every instance to date the improvement under arsenic has continued a progressive course with no retrogression. He thinks it probable that the trypanosomes in the body, destroyed by the drug, have an immunizing action. His theoretical research he adds has produced no tangible results to equal those obtained in the clinic. In two instances the specific trypanosomes were encountered in the salivary glands of the glossina, a condition similar to that observed with the malaria parasite and the anopheles. He is continuing his work with crocodiles, but has had no practical results so far.

97 Diseases Simulating Typhoid.—Jürgens cites eight cases in which the syndrome [illegible] typhoid but an [illegible] apsy or the course of the [illegible] ill[illegible] ary or general intestinal [illegible] or [illegible]. In one case paratyphoid

caused severe gastroenteritis, simulating typhoid fever during the first week, in a number of persons who had eaten the meat. He warns against allowing the etiologic findings to mislead the diagnosis. The clinical term "paratyphoid" is not correct, he says, as the affections induced by the paratyphus bacillus may have nothing in common with typhoid fever.

98 Internal Treatment of Appendicitis.—Pfister relates the favorable experiences at Erb's clinic with ice and large doses of opium in treatment of appendicitis. He recommends this treatment in every primary case except when the general condition indicates peritonitis.

Münchener medizinische Wochenschrift

102 (LIV No. 2, pp. 57-104.) Influence of Excesses of Student Life (beer and fencing) on the Heart. (Biertrinken und Fechten.) A. Bingel.
103 Thermodynamic Study of the Muscles. (Thermodynamik des Muskels.) K. Bürker.
104 Correlation in Heredity from Ophthalmologic Standpoint. (Korrelation bei Vererbung in der Augenheilkunde.) F. Best.
105 *Early Diagnosis of Pulmonary Tuberculosis. (Frühdiagnose etc.) H. Arnsperger.
106 *Roentgen Diagnosis of Pulmonary Tuberculosis. (Roentgenologische Diagnose.) Pförringer and Bunz.
107 *Gastropexy and Retention. (Gastropexie und Retention.) E. Nyrop.
108 *To Render the Kneejerk More Prominent. (Verstärkung des Kniephänomens.) O. Rosenbach.
109 Isolating Cabinets in the Waiting-room of Dispensaries for Children. (Prophylaxe der Infektionen in den Wärterräumen von Kinderambulatorien.) E. Fromm.
110 Nature and Treatment of Alimentary Disturbances in Infants. (Ernährungsstörungen.) M. Pfaundler. (Commenced in No. 1.)
111 Infant Mortality in the Hospital. (Säuglingssterblichkeit im Krankenhaus.) O. Soltmann.
112 Birth Rate and Fertility. (Geburtenziffer und Fruchtbarkeit.) O. Neustätter.

105 and 106 Roentgen Early Diagnosis of Pulmonary Tuberculosis.—Arnsperger writes from Erb's clinic to call attention to the instructive results obtained from Roentgenoscopy in cases of incipient tuberculosis. Almost invariably the first pathologic changes in the apex were perceptible and confirmed the diagnosis. In an extensive experience he has found that the findings in sound lungs are remarkably constant, much more so than percussion and auscultation findings. Any variation from the normal is readily recognized. It is important to have an adjustable diaphragm and an adjustable tube, to examine the lung from various points. He did not find that the excursions of the diaphragm were constantly impeded, as Williams has asserted. This was noted in only 6 per cent. of the cases, and it is probably due to pleuritic adhesions. Changes in the clearness of the Roentgen picture accompany the movements of breathing, the apices, especially, showing varying clearness and size under the influence of respiration. The clear space corresponding to the apex in the Roentgen picture becomes cloudy in case of disease. If the patient breathes deep the sound side becomes perceptibly clearer, while the affected side shows nearly the same cloudy appearance or may even grow darker as the less elastic apex is compressed by the rest of the lung. The findings are approximately the same for a fresh, incipient process as for a healed lesion.

Pförringer and Bunz confirm his statements, especially in regard to the lack of constancy in the excursions of the diaphragm. They review the Roentgen findings in various established affections, and advise combination of radioscopy with radiography as giving the best results. In 54 cases of apical tuberculosis the Roentgen findings coincided with the symptoms, and in 20 the Roentgen rays revealed more extensive changes than had been surmised from the symptoms and other diagnostic measures, and in three cases the findings were less marked than with other measures. In the incipient cases the slight cloudiness of the apex is seen best in the radiograph and may escape radioscopy. Infiltration causes light diffuse shadows and cloudiness, the cloudiness sometimes showing darker specks.

107 Gastropexy and Retention of Stomach Contents.—Nyrop relates some instances of spontaneous fixation of the stomach to the parietal peritoneum or abdominal wall after an operation. The fixation interfered with the motor function of the stomach and led to retention of stomach contents in time. The findings emphasize the importance of testing to see whether or not retention of contents exists as a preliminary to any operation on the stomach, and they also point to the danger of retention as a consequence of artificial gastropexy. In one case of cancer and retention the tumor at the pylorus was resected and gastroduodenostomy done. The stomach was much dilated, with thickened walls. The patient was in good health for nearly three years, after which oppression and pains in the epigastrium at night made daily lavage of the stomach necessary. After three months of progressive retention of stomach contents and emaciation the abdomen was opened and the stomach found fastened to the parietal peritoneum. The weakened stomach had not been able to force the stomach content up to the opening into the duodenum, which was at about the normal height. The consequence was dilatation of the posterior wall of the stomach with secondary retention and resulting inanition, but no traces of cancer. Without anatomic inspection, the case would certainly have been regarded as one of recurring cancer. In another case gastropexy was done for ptosis. The patient was as "nervous" after as before the operation and retention gradually developed. The musculature was so weak by this time that even gastroenterostomy then was unable to put an end to the retention completely. In another case posterior gastroenterostomy was done for hematemesis and symptoms of retention. The stomach walls were found remarkably thin and atrophic, and after a few months of freedom the old symptoms returned and the patient died. Autopsy revealed spontaneous fixation of the stomach. The thinness of the walls had probably entailed the speedy recurrence of the retention. In the fourth and last case universal edema was attributed to existing ptosis of the stomach, with occasional evidences of retention of its contents. A fold was taken up in the stomach wall, and it was fastened in place (gastroplication and gastropexy). After six months of health the posterior wall stretched and the symptoms of hour-glass stomach developed. If gastroenterostomy had been done at first this probably might have been prevented.

108 To Render the Knee Jerk More Prominent.—Rosenbach gives the patient a newspaper or large book to hold and bids him read aloud a certain passage rapidly and loudly. This diverts his attention. He is unable to see his feet owing to the interposed book or paper, and the effort required to hold it ensures the most favorable conditions for the test. When this method is impossible Rosenbach prefers Guttmann's method. This consists in raising the leg of the reclining patient, lifting it up a little with a handkerchief while with another handkerchief, just above the knee, held by an assistant, the thigh is raised also, the knee thus raised forming an obtuse angle.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review as dictated by their merits or in the interests of our readers.

American Practice of Surgery. A Complete System of the Science and Art of Surgery by Representative Surgeons of the United States and Canada. Editors: Joseph D. Bryant, M.D., and Albert H. Buck, M.D. Complete in Eight Volumes. Illustrated. Volume Two. Muslin Binding. Pp. 778. Price $7.00. New York: William Wood & Co.

Studies from the Institute for Medical Research. Federated Malay States. Observations in the Federated Malay States on Beriberi. By C. W. Daniels, M.B., M.R.C.S., Eng. Paper. Pp. 105. Price three shillings and sixpence. London: E. G. Berryman & Sons.

Ninth Biennial Report of the Pennsylvania Industrial Reformatory. Huntingdon, Pa. Paper. Pp. 74. From Jan. 1, 1905, to Dec. 1, 1906. Printed and Bound by Inmates of the Reformatory.

Report of the President of the Board of Health of the Territory of Hawaii for the Year Ending June 30, 1906. Paper. Pp. 115. Honolulu: The Bulletin Publishing Company, 1906.

Principles of Microscopy. Being a Handbook to the Microscope by A. E. Wright, F.R.S., Hon. F.R.C.S.I. Cloth. Pp. 250. Price $6.50. New York: The Macmillan Company, 1907.

A Victorious Defeat. The Story of a Franchise. By Charles Frederic Gilliam. Illustrated by Ted Ireland. Cloth. Pp. 371. Boston: The Roxburgh Publishing Company.

Publications of Cornell University Medical College Dispensary, New York City. Medical Report. Paper. Pp. 156. New York City.

Principles of Spelling Reform. By F. S. Allen. Paper. Pp. 38. New York: The Bradley White Company.

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Original Articles

COCCIDIOIDAL GRANULOMA

REVIEW OF THE EIGHTEEN CASES AND REPORTS OF CASES FIFTEEN AND SIXTEEN

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SAN FRANCISCO

The recognition, within a few years, of a comparatively large number of extremely fatal cases of a hitherto unknown disease, seems of sufficient interest to warrant me in presenting the last of these cases, together with a history of the findings in the other cases, the localities from which they came and a statement of certain experimental data in regard to the possible modes of infection

A review by Ricketts[1] on oidiomycosis gives an interesting statement of the pathogenicity of the moulds that belong to this class and a discussion of their relation to each other He dwells at great length on the cases of blastomycetic dermatitis, occurring in the middle West, reviews fourteen old cases of this disorder and reports several more which he has collected He also reviews the cases of coccidioidal granuloma and considers that there is a close relation between it and blastomycetic dermatitis and also Busse's saccharomycosis hominis

Ophuls[2] reviews the published cases of coccidioidal granuloma, and in 1905, at the annual session of the American Medical Association, gave in a supplementary paper the cases that have occurred since He pointed out very plainly certain essential differences between this disease and blastomycetic dermatitis and reviewed the morphologic and histologic studies of the condition so thoroughly, that it seems unnecessary to go into them here It is sufficient to state that in coccidioidal granuloma there are certain characteristics which differ decidedly from blastomycetic dermatitis The differences in the behavior of the two organisms on culture media are very striking, even in the organisms of blastomycetic dermatitis, which most closely resemble those of coccidioidal granuloma, there are essential differences It must be apparent that no one mould is responsible for the various lesions which Ricketts groups under the name of blastomycetic dermatitis and he makes clear in his tabulation of the morphologic characteristics that some resemble the organism of coccidioidal granuloma more than others do On agar the growths of the coccidioidal granuloma mould are all sharply defined even when grown on dry media where the mycelia are especially profuse This is not true of any of the growths from blastomycetic dermatitis The mould from coccidioidal granuloma is never found in the budding state in tissue although in pus withdrawn from abscess cavities beautiful examples of its growth by budding are shown Cutaneous lesions are often entirely secondary in coccidioidal granuloma and may even be wanting altogether Generalized infections are the rule and the only patient known positively to be still alive, is a man with lesions in the ankle, whose foot was promptly amputated He has been reexamined within a few weeks and at the time there were no signs of any further involvement of the body Two of the patients were discharged from the hospital benefited, but nothing has been heard of them since and it seems probable that they could have been traced were they still alive Only one of the cases of blastomycetic dermatitis became subsequently a generalized infection and the patient died from the disease There is good evidence that cases of blastomycetic dermatitis have been held in abeyance or cured by potassium iodid This has been very thoroughly tried in coccidioidal granuloma in a number of cases (I can speak most positively for the one I am reporting), and there was not the slightest benefit from it

Lesions of coccidioidal granuloma are almost invariably progressive, with marked tendency to dissemination by lymph and blood currents In very rare instances, healed lesions have been observed and in a few of the cases the course of the disease was extremely low It is probable that the skin lesions were primary in some of the cases, particularly as in those cases where skin manifestations were noted before other symptoms they occurred always on exposed parts

Attempts were made to transmit the disease to guinea-pigs through original cultures from Case 15, in the following manner Cultures known to have reached the spore-forming stage were transferred to the nostrils of pigs who were kept in glass cases Another set of pigs were fed on similar cultures A male pig was inoculated intraperitoneally and because of the characteristic genital lesions in pigs so inoculated, as pointed out by Ophuls, the experiment of transmission was tried by placing him in a cage with female pigs

The secondary skin lesions are undoubtedly due to emboli in the blood current and of course occur anywhere So far as I know no blood cultures have been attempted and it is hoped that this may be done in the cases that are likely to follow The diagnosis of the disease is so easy after one has once known of its existence that ample opportunity for studies of the infectious nature of the blood must present itself I regret exceedingly not having tried it in Case 15

CASE 15—S K aged 25 Japanese laborer consulted me Feb 22 1906

Past History—His past history is negative to time of leaving Japan in 1903 He lived in Honolulu two years came to California in June 1905 and entered the employ of the Southern Pacific Company at Bakersfield He worked in an extra gang along the line from Bakersfield to Tulare and came to the hospital from Tulare where he had been working for a month While in Bakersfield he had what was regarded as beriberi for a [illegible] the [illegible] was not [illegible] enough to keep him from [illegible] from [illegible] well up to Nov 9 [illegible]

1 Journal of Medical Research vol vi No 3

2 Journal of Experimental Medicine vol vi

never had syphilis or gonorrhea, he does not remember having had a break in the skin at any time, certainly he has had no skin sores

Present Illness—On Nov 9, 1905, he had a vomiting spell and felt feverish He thought he had caught cold, on account of a troublesome cough He came to the Southern Pacific Hospital on Nov 13, 1905, complaining of pain in his chest, a cough, constipation, slight headache, with pain in right ankle and left sternoclavicular articulation. The pain was not severe or constant and occurred only on moving the joints Temperature on admission was 100 8

Examination—Nutrition was good. Tongue was slightly coated Heart sounds were normal There was normal resonance over the chest Abdomen was normal. No cutaneous lesions could be seen anywhere There was no enlargement of glands There was an old hydrocele on the left side None of his joints was swollen or sensitive to touch and there was no impairment in function in any of his joints Nerve tracts were not tender and there was no edema

Course of Disease—During the first week in the hospital the pain began to be more severe and more constant in the right

Fig 1—Case 15

ankle and left sternoclavicular articulation These joints were not red or tender Other joints became painful on movement, the right wrist and left clavicularscapular articulations being attacked successively Four weeks later a fluctuating swelling appeared in the region of the right internal malleolus This was followed within a period of twelve or fourteen days, by the appearance of similar fluctuating swellings in the following places successively Dorsum of right hand, right supraclavicular fossa, left supraspinous fossa, left sternoclavicular articulation At this time the right inguinal, the epitrochlear glands on both sides and the right cervical glands became enlarged The swellings developed with great rapidity for two or three days but after that did not apparently increase in size or change in appearance or consistency There was no redness tenderness or edema of the skin covering them There was no pain at any time at the swelling over the right supraclavicular fossa At the right sternoclavicular articulation crepitation could be elicited The swelling over the right internal malleolus was incised and a seropurulent fluid evacuated Necrotic bone was found to exist (In order to get a specimen free from contamination the swelling on the dorsum of the hand was aspirated and smears made Examination was negative.) A few days later the swellings over the right supraclavicular fossa, left sternoclavicular articulation and left supraspinous fossa were incised and curetted The left sternoclavicular articulation was found to be necrotic and also the the inner end of the clavicle The spine of the scapula was found to be necrotic. The cavity in the right supraclavicular fossa did not communicate with the bone at any time, but extended between the layers of fascia toward the right pleural cavity The wounds were packed with iodoform gauze, saturated with iodoform emulsion Specimens of the pus and necrotic tissue were submitted to the laboratory, and pure cultures of the mould of coccidioidal granuloma obtained A clinical diagnosis was made by several doctors before this

Patient lost steadily in weight and there was considerable anorexia Bowels were regular at this time (eighth week of disease) Cutaneous lesions appeared (having no connection with bone or joints) over the right malar bone, on the chin about an inch on left side of the symphysis, posterior surface of left forearm, on posterior surface of right forearm and on right thigh They began as papillæ, which became converted into flat papillary tumors, circular in shape, covered with crusts On removal of the crust, pus escaped and a shallow ulcer was seen with an uneven floor, which bled easily on being touched These ulcers continued to increase in size and in the case of the one on the chin, in depth, until it reached nearly to the bone The patient's temperature was variable, at times normal, then, again 99 in the morning and 100 or 101 in the evening During the last two weeks it was higher, sometimes 100 in the morning and 102 or 103 in the evening During the last 48 hours the abdomen became distended and the temperature was 104 in the evening No special tenderness

Urinalysis December 30 1020, acid, trace albumin, few hyaline and fine granular casts

Blood Examination Jan. 1, 1906 Reds, 2,500,000, whites, 13,000, 79 per cent polymorphonuclears, 17 per cent small, 2 per cent large, 2 per cent. eosinophiles, hemoglobin, 50

Treatment—Patient was given potassium iodid in increasing doses three times a day and tonics No benefit followed medication The man died Jan. 23, 1906

Autopsy Report by Dr Mary Halton—Body of a fair sized Japanese male. Condition of nutrition very poor Small superficial ulceration about the size of a ten cent piece over anterior half of right zygoma There is conspicuous absence of redness or infiltration around the ulceration and this is true of every lesion found on this patient The floor of the ulcer is of a dirty grayish color and is moderately moist The ulceration is very shallow and lacks any punched out appearance Practically no red granulation tissue is to be seen

On left side of chin is a small, incised, rather superficial abscess This contains a small quantity of creamy yellow pus There is no redness or thickening whatever about the abscess Abscess wall is of a yellowish white color and rather thin No connection was found between this abscess and the bone Many cervical glands both anterior and posterior on right side enlarged, movable, rather soft Largest about the size of a hazelnut. Incised they appear to be very largely broken down into a thick yellowish pus

In right supraclavicular fossa is an incision about 6 5x10 cm long This leads right into an irregular labyrinthine abscess cavity burrowing between the layers of cervical fascia in many directions, more especially downward There is a large quantity of thick, yellow pus in this abscess cavity Upper and inner surface of inner third of clavicle is eroded

There is an incision about 5 cm long over left sternoclavicular articulation running out along the inner third of left clavicle. Sternoclavicular joint is disintegrated and the clavicle is necrotic for a distance of about half an inch Sternum is also eroded Cavity contains much thick pus Incised abscess in outer half of left supraspinous fossa The abscess extends outward toward acromion process, and outer third of spine of scapula shows superficial necrosis This abscess also shows much thick creamy pus

Dorsal surface of right hand shows large incised abscess cavity There is some edema extending over metacarpal region of

this hand Third and fourth metacarpal bones show extensive superficial erosion Same creamy pus found in this cavity On extensor surface, upper third left forearm is a small, shallow ulceration about 2 cm in diameter The description of ulceration over zygoma will exactly correspond to the description of this ulcer There is a similar, small ulceration on lower third extensor surface right forearm Epitrochlear glands palpable, largest on right side On right thigh, outer side, upper third, is a small ulceration about 2.5 cm. in diameter The floor of this ulcer, unlike the others, shows a few red granulations, otherwise it is practically the same

Right ankle is much swollen. There is a large incision over internal malleolus A sinus leads into ankle joint which contains about 10 c c. of thick creamy pus The internal malleolus is about half gone, what remains shows an eroded surface The astragalus and calcaneum show a roughening at edges of articulations None of the bone lesions were of the soft spongy type The bone left in all cases was very hard and showed an eroded surface

In apex of right pleural cavity is a small abscess about the size of a dime, pointing into the pleural cavity and only covered by a thin layer of parietal pleura With slight trauma this abscess was made to rupture into the pleural cavity, and the abscess was then found to be continuous with the large burrowing abscess of the neck on that side. A few adhesions were seen between the apex of right lung and sternoclavicular articulations No fluid in right pleural cavity Mediastinal glands enlarged, largest about the size of almond Left lung shows adhesions light and friable anteriorly and posteriorly, adhesions much thicker in apex near abscess above About 10 c.c of blood tinged fluid in left pleural cavity Right primary bronchus filled with pus like fluid No particular infection of bronchus Weight of lung, 18 ounces, size, 23x16x5 5 cm Lung somewhat edematous Left lung, slight hypostasis and edema, otherwise apparently normal Weight 17 ounces, size, 23 5 x 14 x 5 5 cm Abscess in one of the peribronchial glands

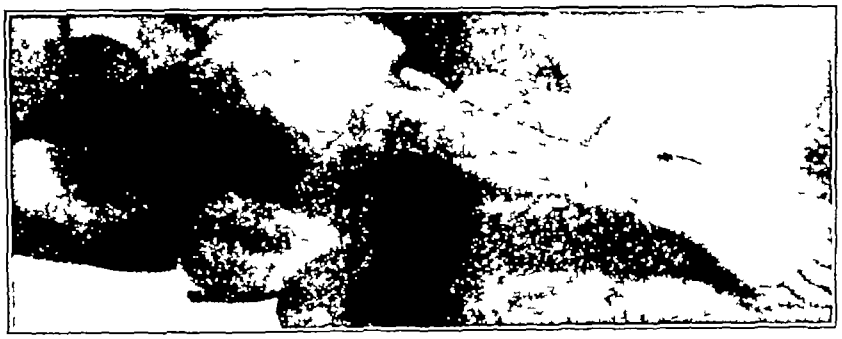

Fig 2.—Case 15

Heart—About 10 c.c. blood stained fluid in pericardium Weight, 9½ ounces Valves normal Muscles pale, otherwise normal

Abdomen—Lower border *transverse colon* at umbilicus

Liver—One inch below costal margin in mammary line Upper border fifth rib

Diaphragm—Right side, fifth rib Left side, fifth rib (?)

Intestines—Much distended About 25 c.c of seropurulent fluid in right iliac fossa About 5 c.c of thicker pus in rectal region Appendix normal. Many heavy flakes of fibrinous exudate scattered over intestines, more marked in right iliac region Conspicuous lack of injection of peritoneal surfaces, also a conspicuous lack of adhesions between the viscera

Spleen—12x6 5x2 cm , weight 3 3/16 ounces In hepatic fossa is about 50 c.c. of pus, held as an abscess by adhesions

Liver—Surface covered by heavy fibrinous deposits weight, 3 pounds 4½ ounces, size, 29x14x7 75 cm A little pale Gall bladder normal

Kidney—Right Weight, 5 ounces size 1 5x5 5x2 5 cm Left Weight, 5¼ ounces size 12x6 5x2 5 cm Normal Capsules strip easily Markings normal Both kidneys a little pale Many mesenteric glands enlarged, the largest about the size of a bean A number of hemolymph glands enlarged, largest about size of almond Right adrenal normal

Stomach—Very much dilated contains about 0 5 liter of partly digested food Mucous membrane of cardia shows some digestion postmortem Small quantity of food in intestines

Pure cultures oidium coccidioides obtained from peritoneal fluid and unopened abscesses

All cultures and specimens were lost in the fire.

CLINICAL SUMMARY OF CASES

CASE 1—Obvious lesions in skin, duration of disease, seven years, patient resided in San Joaquin Valley seven months Extent of disease Lymph glands and disseminated nodular lesions in internal organs

CASE 2—Obvious lesions in skin, local nine years, duration of disease, 10 years, patient resided in San Joaquin Valley several months Extent of disease Lymph glands, many chronic skin abscesses, old scars and consolidated areas in lungs, chronic nodular pleurisy, nodules in diaphragm, circumscribed chronic nodular peritonitis beneath diaphragm and in pelvis, peribronchial and retroperitoneal glands, spleen, adrenals, prostate, both epididymides, testes, seminal vesicles, osteomyelitis in left tibia and metacarpal bone of left hand

CASE 3—Obvious lesions in skin, duration of disease, three months, patient resided in San Joaquin Valley Extent of disease Regionary lymph glands certainly involved and signs of general infection No autopsy

CASE 4—Obvious lesions in lungs, duration of disease, 10 months, patient resided in San Joaquin Valley, but time not known Extent of disease Skin, abscess of lung extending up into neck and abscess of liver, lymph glands, osteomyelitis

CASE 5—Obvious lesions in lungs, patient resided in San Joaquin Valley, but time not known Extent of disease Osteomyelitis and periostitis of frontal bone and both tibiæ, suppurative inflammation of right shoulder, both knees, elbows and wrists, abscess from lung extending into mediastinum and diaphragm, liver, retroperitoneal lymph glands, kidney, spleen

CASE 6—No clinical history, no history of residence Extent of disease Lungs, pericardium spleen, kidney, meninges

CASE 7—Obvious lesions in lungs duration of disease, three and a half months, patient resided in San Joaquin Valley for twelve days shortly before onset Extent of disease Meningitis

CASE 8—Obvious lesions in skin, no clinical history, patient resided in San Joaquin Valley Extent of disease Lung, spleen, liver, kidney and adrenals

CASE 9—Obvious lesions in skin Duration of disease observed four months, patient discharged improved, resided in San Joaquin Valley several months Extent of disease Skin of foot, inguinal and cervical lymph glands, abscess anterior abdominal wall

CASE 10—Internal lesions, patient still alive two years later, resided in San Joaquin Valley some months Extent of disease Osteomyelitis, foot

CASE 11—Internal lesions, probably in lungs patient supposed to be alive, resided in Sacramento Valley, never in San Joaquin Extent of disease Abscess of ribs

CASE 12—Internal lesions, probably in lungs Duration of disease a few months, patient resided in San Joaquin Valley some months lived in California in course of travels Extent of disease Caries at elbow lungs, probably meninges

CASE 13—Wolbach *Jour Med Research* 1904 xiii case not yet published

CASE 14—Obvious lesions in lung Burrows case (unpublished), duration of disease eleven months patient resided in San Joaquin Valley four months Extent of disease Multiple abscesses of lung erosion ter[illegible] sion abscess of sacrum [illegible] of nose

CASE 15.—Obvious lesion in intestinal tract, author's case. Duration of disease two and one half months, patient resided in San Joaquin Valley five months. Extent of disease: Abscesses with caries of the adjacent bone in the right supraclavicular region, left sternoclavicular articulation, left supraspinous fossa, dorsum of right hand, right ankle, mediastinal glands, peribronchial glands, general involvement of the peritoneum with enlarged mesenteric glands, ulceration on right thigh, left forearm and over right zygoma, on chin.

CASE 16.—J. B., male, aged 28. Family history good, no tuberculosis.

History.—Patient has been two and one half years in San Joaquin Valley, he worked on irrigating ditches near Fresno. Patient consulted his physician, complaining of general malaise, had no acute symptoms at any time. He has been treated for malaria, large doses of quinin having been administered without effect. He had had a sluggish punched out ulcer on left wrist, red, with jagged edges, bathed in thin greenish pus, this had partially healed and broken down several times.

Examination.—Under the left clavicle he had an ovoid tumor 4x6 cm., slightly fluctuant and showing no signs of inflammatory process externally, another larger swelling of similar character appeared on the seventh, eighth and ninth ribs in the left parosternal line. On aspiration these tumors contained thin greenish pus loaded with coccidia like bodies, these had a double contoured capsule but no budding forms, some of these bodies contained spores, with granular protoplasm. Owing to the patient's departure for Oregon, no cultures were made. The patient died in Oregon.

Remarks.—Three years after the first appearance of the ulcer on the wrist, a local physician who attended him in his last illness diagnosed the case as acute miliary tuberculosis. Autopsy showed the lungs to be studded with what appeared to be miliary tubercles and no further examination was made. No *Plasmodia malariæ* were found. The blood showed an eosinophilia of 12.5 per cent. The tumors had been diagnosed in Fresno as benign fatty tumors.

Since reporting the above cases, I have found two more cases in the service of Drs. E. R. Bryant and H. G. Gates of Los Angeles. The conditions presenting were as follows:

CASE 17.—K. N., Japanese, aged 28. Examined July 10, 1906. Employed as a track worker by the Southern Pacific Railway in the San Joaquin Valley for some months preceding his entrance to the hospital. His first symptoms were pain in the neighborhood of the ankle joint, with swelling and redness. Later cervical adenitis. All the lesions suppurated and were treated surgically and healed in from seven to ten days. In a few weeks further abscesses developed in the neighborhood of the former ones and on the face. None of the abscesses was found to connect with the bone. Cultures from a fresh abscess were made and showed the organism characteristic of coccidioidal granuloma. The patient ran a slight fever.

CASE 18.—T. C. Greek, aged 24. Lived in California three years and in San Joaquin Valley eighteen months. Examined July 10, 1906. Initial symptoms began about June 15, 1906, with pain in the left axilla simulating pleurisy. Shortly after there appeared a breaking out on the forehead and scalp, pustular in character. The skin lesions became covered with a thick crust, a cough developed and the patient ran an irregular fever and lost steadily in weight. On examination it was found that the crusts covered small ulcerating surfaces, and when removed a few drops of pus exuded. There were irregular areas of consolidation in the lungs, and loud, moist rales everywhere. Diagnosis was not confirmed by culture examination, but the skin lesions were quite characteristic and the lung condition not to be accounted for by tuberculosis or bronchopneumonia of the usual type.

SUMMARY

Specimens of foot amputated by Dr. S. J. Gardner (Case 10) and autopsy specimens of Case 15 with cultures illustrating the morphology of the organisms of oidium coccidioides and blastomycetic dermatitis (obtained through Morrow from cultures sent him of the Chicago cases) were all destroyed by fire, although I had sets of cultures in three parts of town. The pigs also were destroyed before any definite facts were elicited.

Site of initial lesion	
Skin	5
Internal (chiefly lungs)	12
Unknown	1
	18
Residence in San Joaquin Valley	
Positive	14
Negative	1
No history	3
	18

Only one patient is known positively to be alive (Case 10) with local lesions in foot which was promptly amputated. There was no recurrence two years later. Two patients can not be traced. The majority lived less than one year and in all the patients with internal lesions who could be traced the disease was acute from the time the internal lesions began. The disease in California seems to be confined to the lower half of the San Joaquin Valley and has occurred chiefly among men working on railroad construction or irrigating ditches. The patient in the Sacramento case handled raw hides. No case has been found in women. The pericardium and heart alone have escaped involvement, in the list of parts affected by the disease. The dissemination in the human being seems to be through both blood and lymph channels.

THE NATURE OF HERPES SIMPLEX, WITH A CONSIDERATION OF ITS DIAGNOSTIC AND PROGNOSTIC SIGNIFICANCE IN VARIOUS INFECTIOUS DISEASES *

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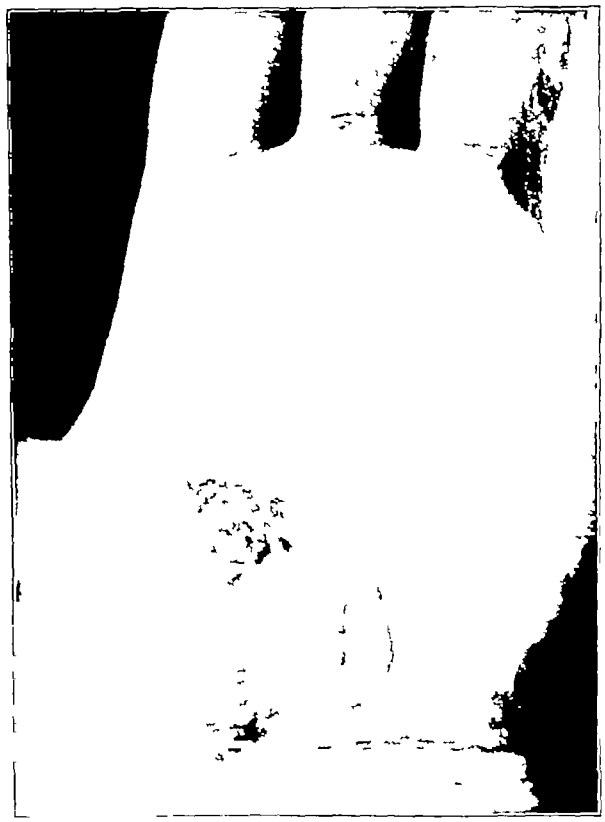
There are many features of resemblance between simple herpes and herpes zoster, but there are also strong points of dissimilarity. In extreme cases of herpes, particularly about the face, it is sometimes difficult to distinguish between the zoster and simple forms. The clusters of firm vesicles on an erythematous base are identical in both. Histologically, the lesions in the skin and those in the affected nerve structures are practically the same in the two varieties. Thus far simple herpes might almost be regarded as a circumscribed abortive zoster, but there are other differentiating clinical features. The most important is the tendency to recurrence in simple herpes, contrasted with such a rarity of second attacks in herpes zoster as almost to suggest an immunity conferred. Indeed, second attacks of true zoster are no more common than second attacks of measles or scarlet fever. Head and Campbell met with only four cases in 400 cases of zoster. There are certain patients who are so subject to facial herpes that they suffer eight, ten or more attacks a year. In herpes zoster, moreover, there is more pain and the eruption follows in a general way the area of distribution of nerves. In elderly patients neuralgia may persist for weeks, months or years after the disappearance of the eruption.

* Read at the meeting of the Medical Society of the State of Pennsylvania, September 1906.

PATHOLOGY OF BOTH FORMS OF HERPES

Many years ago Barensprung suspected that herpes zoster of the trunk was caused by some lesion affecting the sensory spinal ganglia Subsequent study has proved the correctness of this shrewd conjecture A number of careful autopsies in persons who had suffered from herpes zoster have demonstrated gross structural change in the ganglia on the posterior roots of the spinal cord The most important work on this subject has been published by Head and Campbell, who made autopsies on 19 patients who had recently or remotely suffered from herpes zoster The acute changes found in herpes zoster consist in (1) extremely acute inflammation with exudation of small, round, deeply staining cells, (2) extravasation of blood, (3) destruction of ganglion cells and fibers, (4) inflammation of the sheath of the ganglion The changes are always in the posterior roots, the anterior roots being normal Herpes zoster, according to



A single patch of herpes simplex on palm of hand due to trivial cause Similar patches are seen in meningitis of both the epidemic and tuberculous types

those investigators, might be justly spoken of as an acute posterior poliomyelitis analogous to the acute anterior poliomyelitis causing infantile palsy The only cranial nerve in whose distribution herpes zoster occurs is the trifacial, and similar changes to those found in the spinal ganglion have been found in the Gasserian ganglion As early as 1871 Wyss[1] described structural alterations in this ganglion in a patient who died in the early stage of supraorbital herpes zoster Sattler has also found changes in this ganglion in trifacial zoster

These findings are of importance in discussing the etiology of herpes facialis and its relation to herpes zoster for in the former affection practically identical changes in the Gasserian ganglion have been found W T Howard,[2] in an important contribution, gives the result of two carefully performed autopsies on patients dying of pneumonia, the one complicated by herpes zoster and the other by herpes labialis

In the first case, a woman 63 years of age, died of double pneumonia This patient had a well-marked herpes zoster in the mid-dorsal region of the left side in the spinal root ganglion (11th dorsal) corresponding to the area of the herpetic eruption Pronounced changes were found consisting of congestion and hemorrhages in the capsular and interstitial tissues At one site of the ganglion was cellular infiltration and destruction of a few ganglion cells, furthermore, amylaceous and hyaloid bodies in another portion of the ganglion

The second case was one of croupous pneumonia in a man 41 years of age, who died on the sixth day of the illness Two days before death a well-marked herpes of the upper lip and nose appeared, more extensive on the left side The following changes were found

Congestion of the veins about the origins of the superior maxillary branches of both Gasserian ganglia Hemorrhages into the capsule and tissue, with interstitial cellular infiltration and compression and degeneration of the ganglion cells near the region of the superior maxillary branch of the left Gasserian ganglion A few small areas of cellular infiltration in the same part of the right Gasserian ganglion Marked congestion of the veins of the neck and brain and of the cerebral sinuses

Councilman, Mallory and Wright[3] found acute inflammation of the Gasserian ganglion in cerebrospinal meningitis from extension of infection along the nerves

ETIOLOGY OF HERPES ZOSTER AND SIMPLEX.

Both forms of herpes are due to a variety of etiologic factors Though diverse in character, they all produce an intense irritation or actual inflammation of ganglia or nerve fibers Exposure to cold or wet and sudden checking of profuse perspiration may act as causes, injury or pressure on a nerve trunk may produce herpes zoster Herpes zoster has frequently been produced by the administration or accidental ingestion of arsenic, the drug setting up a neuritis A number of dermatologists regard herpes as an infectious disease and quote epidemic prevalence of the affection in support of this view Epidemics of herpes simplex are also occasionally observed Zimmerlin[4] reports an epidemic of facial herpes occurring in the wing of a hospital at Basle, in which 16 out of 30 cases appeared in physicians and nurses

Among the cases of herpes zoster and herpes simplex observed in the Polyclinic Hospital, I have never noted any particular evidence of epidemicity nor have these affections been more prevalent at any particular season of the year We have treated 146 cases of herpes zoster and 83 cases of herpes simplex These occurred in the following months

Herpes Simplex		*Herpes Zoster*	
January	10	January	17
February	8	February	5
March	6	March	12
April	7	April	11
May	7	May	8
June	10	June	16
July	14	July	19
August	6	August	10
September	5	September	
October	10	October	
November	4	November	
December	6	December	
Total	83		7

1 Wyss Archiv für Derm u Syph 1872

2 W T Howard Amer Jour Med Sci

3 Mass State Board of Health Report

4 Correspondenz Bl f Schweizer Aerzte

An important etiologic factor is age Childhood and early adult life are the ages at which most cases of herpes simplex and zoster occur Fifty-five per cent. of the cases of herpes simplex and 48 per cent of the cases of herpes zoster developed in patients between the age of 10 and 30 years

HERPES IN INFECTIOUS DISEASES

The occurrence of facial herpes, or, indeed, simple herpes anywhere on the cutaneous surface, is often of great diagnostic value in differentiating certain infectious diseases The study of the incidence of this condition in various infectious processes shows that herpes is peculiarly related to certain diseases and forms an important part of their symptomatology In certain other specific febrile disorders herpes occurs with great infrequency and even rarity

Herpes in Croupous Pneumonia.—Many writers have indicated the great frequency with which attacks of herpes develop in the course of croupous pneumonia It is said ordinarily to occur between the second and fifth days of the disease, although it may appear earlier or later than this period Most writers state that it occurs in from 12 to 40 per cent of the cases, and these figures are approximately correct In 1,863 cases, most of which were collated by E F Wells,[5] herpes was present in 30 6 per cent These cases were observed by ten physicians in various parts of both continents, and may, therefore, be accepted as indicating the general incidence of herpes in this disease In some localities and in certain epidemics, wide variation in the frequency of herpes has been observed

Hermann, for instance, noted herpes in 65 per cent of 40 cases of pneumonia, whereas, in other epidemics, this symptom has been present in as low as 13 and even 7 per cent of the cases Concerning the prognostic value of herpes in pneumonia, reference will be made later

Below is appended a table showing the frequency with which herpes has been observed by various writers

HERPES IN CROUPOUS PNEUMONIA.

	Per cent.
Bleuler[6]	43
Drasche[7]	40
Volkmann[8]	13
Geissler[9] 421 cases	43
Hawkins,[10] 220 cases	16
Hermann[11] 40 cases	65
Rall[12]	34
Kissel[13]	100
Lebert[14]	13
Scheef,[15] 44 cases	20
Speck[16] 50 cases	18
Shapira[17] 173 cases	29
Short,[18] 286 cases	20
Townsend[19]	7
Waller[20] 81 cases	47
Wünderlich[21] 50 cases	50
Ziemssen[22]	50
E F Wells,[5] 408 cases	26

Herpes in Cerebrospinal Meningitis—In cerebrospinal fever, herpes is a symptom of great diagnostic value, although it is generally stated that herpes is more common in croupous pneumonia than in any other disease, statistics do not seem to bear out this assertion, as will be seen from the subjoined table

HERPES IN CEREBROSPINAL MENINGITIS

	Per cent.
Tourdes	60
Leyden	75
Frilis (Copenhagen) 54 of 107 cases	50
Jaffe (Hamburg)	41
Councilman et al (Boston 1897) 35 in 111 cases	31
Average	52

In the above reported figures, herpes was present on an average in 52 2 per cent of the cases As is true of other diseases, the incidence of herpes in cerebrospinal fever varies considerably in different epidemics, but the fact remains that it is a most common manifestation of the disease The erythematous and petechial eruption which has given to the disease the name of spotted fever is less frequent than herpes, and in some countries, as, for instance, Germany, is of great rarity Herpes, therefore, may be regarded as the most frequent cutaneous symptom of cerebrospinal fever, although it is not its most characteristic eruption Given a patient suddenly ill with headache, retraction of the head and herpes, and we have a strongly suggestive picture of an oncoming cerebrospinal meningitis Herpetic vesicles are not limited to the face alone, but occur on the neck or distal portions of the extremities I recall seeing one patient in whom a patch of herpes was present on the last phalanx of the thumb I have also, however, noted the appearance of herpetic vesicles on the finger in a case of tuberculous meningitis Herpes accompanying very mild disturbances may likewise be circumscribed to the hand as in the photograph here reproduced Herpes occurring in the course of cerebrospinal fever does not differ from ordinary herpetic attacks Patches are at times more extensive, but frequently are quite limited as regards area covered

Herpes in Malaria—Malarial fever comes third in the group of diseases in which herpes is a prominent symptom Griesinger[23] observed herpes in 117 out of 390 cases, or about 30 per cent. Kelsch and Kiener[24] believe it to be present in one-third of the cases Its presence is of great value in diagnosis because of its comparative rarity in typhoid fever, a disease with which malaria may frequently at the outset be confounded Herpes may occur in malaria during the cold or hot stage, or, indeed, at any time in the course of the disease

Herpes in Influenza.—It is not rare for herpes to develop in the course of attacks of influenza The German Collective Investigation Committee found this symptom present in 6 per cent. of the cases collated Curtin and Watson[25] found herpes zoster more common than herpes labialis In about 6,000 cases of influenza, they observed herpes zoster six times and mention the fact that eleven cases were reported by two other physicians "Herpes labialis was rare, differing in this respect from malarial fever"

Herpes in Typhoid Fever—It has long been noted that herpes occurs with great infrequency in typhoid fever, indeed, to such an extent is this true that some writers erroneously allege that it does not occur at all Osler's figures on the subject enable us to judge of the

5 E F Wells THE JOURNAL A. M. A. May 20 1894 p 767
6 Bleuler Inaug Diss. Zurich 1865
7 Drasche Canstatt s Jahreab 1860 vol ci p 207
8 Volkmann Inaug Diss Erlangen 147 p 17
9 Geissler Arch d Heilkunde, 1861 p 115
10 Hawkins Lancet April 1 1893
11 Hermann Lungenentzündung München 1880 p 36
12 Rall Pneumonie Eulenberg, 1852 p 159
13 Kissel Klinik d. Brustkrankheiten Tübingen vol I
14 Lebert Inaug Diss Erlangen 1887 p 33
15 Scheef Inaug Diss Tübingen 1882, p 38
16 Speck Inaug Diss. Marburg 1870 p 30
17 Shapira Inaug Diss. Wurzb 1877 p 58
18 Short Inaug Diss Wurzb., 1884 p 58
19 Townsend THE JOURNAL A. M. A., Dec. 1 1888 p 789
20 Waller Op cit., S 4
21 Wünderlich Inaug Diss. Tübingen 1858 p 59
22 Ziemssen Pleuritis u. Pneumonie Berlin 1863
23 Griesinger Traité des Malad Infect. p 59
24 Kelsch and Kiener Quoted by Mannaberg Nothnagel s Spec. Path u Ther 1899 11 130
25 Curtin and Watson Climatologist, Feb 1892

infrequency of its development Among 1,500 cases of typhoid fever, herpetic outbreaks were found in 20 patients, or a little more than 1 per cent of the cases In the Johns Hopkins series of 829 cases herpes was served in 29 patients, or 3 5 per cent. D J M Miller[26] recently observed 4 cases of herpes among 250 cases of typhoid fever examined Many of the older writers maintained that even when all the characteristic symptoms of typhoid fever were present a case must be regarded as this disease, if herpes labialis developed Some modern writers refer to herpes as negatively pathognomonic of typhoid fever Certainly this symptom is so uncommon that the development of herpes in the course of a febrile attack would tentatively negative the diagnosis of typhoid fever In acute tuberculosis and in typhus fever, both affections which may come into differential conflict with typhoid fever, herpes is occasionally observed

Herpes in Relapsing Fever—The occurrence of herpes in relapsing fever is likewise uncommon Semon,[27] in an epidemic of relapsing fever in Berlin, observed only four cases of herpes in 160 cases of the disease

Herpes in Other Diseases—Concerning the frequency of herpes in the acute exanthematous diseases, no published figures are available as far as I have been able to ascertain Herpetic outbreaks are of great rarity in smallpox Among over 3,000 cases of smallpox that I have seen, I have observed but two cases of herpes, I am unable to present any figures in regard to the frequency of herpes in scarlet fever I do not think, however, that this manifestation is so rare as in smallpox From a general impression that I have received I should estimate that herpes occurs in about 3 per cent of the cases In diphtheria attacks of herpes are also occasionally observed

THE PROGNOSTIC VALUE OF HERPES

Many writers have insisted that the development of herpes in certain infectious diseases, notably pneumonia and malaria, is of distinct value in enabling one to forecast the outcome of the illness In what manner the appearance of a few fever blisters becomes the harbinger of a favorable development of the disease and ultimate recovery can not be explained The herpetic attack is sometimes regarded as analogous to a critical chill or discharge, but the time at which the herpes develops in the course of many illnesses precludes such an explanation The extent to which herpes may be regarded as a symptom of favorable omen in pneumonia and malaria can not be justly estimated at the present time Most authors, however, attribute to the development of this symptom a favorable prognostic significance Osler, in speaking of herpes in pneumonia, conservatively says "It is supposed to be of favorable prognosis, and figures have been quoted in proof of this assertion" The opinion that herpes was a favorable indication was believed many years ago Hebra, the great Vienna dermatologist, did not share this view In 1866 he wrote "Observation teaches that this form of herpes is neither of good nor of bad augury with reference to the probable outcome of the disease which it accompanies" If we rely however, on the statistics published we can not fail but be impressed by the remarkable discrepancy in the mortality of cases of pneumonia associated with herpes and those without this eruption

Geissler presents strong evidence of the prognostic significance of herpes in 421 cases of pneumonia studied by him Of 181 patients with pneumonia, with herpes, 17, or 9 3 per cent, died, of 239 without herpes, 70, or 29 3 per cent, died, 159 patients were over 30 years of age, of those, 50 had herpes and 10 patients, or 20 per cent., died, 109 had no herpes, and of this number 58 patients, or 53 2 per cent, died.

Sir Dyce Duckworth believes that herpes is a good sign in pneumonia, usually occurring in cases in which a well-defined crisis develops on the sixth day Cases that are grave and prolonged with deferred crises usually do not present it.

In malarial fever, herpes is likewise alleged to constitute evidence of an early and favorable outcome of the disease Dr Arthur Powell, at whose hospital service in Assam, India, more than 100 patients with malaria are seen daily, states that the development of herpes is invariably an evidence of the cessation of the attack He says "If during an attack of remittent or intermittent fever, a patch of herpes breaks out on the lips, face or elsewhere, I always look on this as a sign that the malarial attack is over In all my experience, I have never met a case to negative this theory, which I thought was well known by our profession" This may be true of malaria in India, but in this country herpes occurs often early in the course of malaria and in attacks that do not promptly cease after its appearance

That herpes has any prognostic significance in cerebrospinal fever I can not from my experience with this disease believe, although some writers contend that it has Tourdes is of the opinion that herpes is a symptom of good omen Figures, however, do not appear to bear out such a contention In an epidemic in Copenhagen, the mortality of cerebrospinal meningitis accompanied by herpes was 32 3 per cent, while in cases without herpes it was 35 5 per cent, too slight an increase to be significant.

Another form of simple herpes to which reference has not been made is herpes genitalis This is often regarded as occurring reflexly from genital irritation As Fournier, Bergh and Unna have pointed out, it is much more common in prostitutes than in married women, furthermore, it frequently follows gonorrhea and other venereal infections It is not improbable, therefore, that, in the majority of cases, it may be of infectious origin, as are most, if not all, of the cases of facial herpes Genital herpes commonly exhibits the same tendency to recurrence as is observed in some cases of facial herpes

It would appear, therefore, that apart from traumatism to nerve structures most cases of herpes—herpes zoster, facial herpes and genital herpes—are of infectious origin The probabilities are that a toxin or poison is absorbed which has a special affinity for nerve tissue particularly for the cells of sensory ganglia It is not necessary to assume that this poison which might be termed an "herpetoxin" is the result of any one specific micro-organism While two of the diseases in which herpes is a prominent symptom (pneumonia and spotted fever) are of diplococcic origin, as is likewise gonorrhea the third disease, malaria, is produced by an entirely different form of parasite Just as rashes indistinguishable from that of scarlet fever may be produced by a variety of toxins and drugs, so may herpes be produced by certain toxins, and herpes may be produced by arsenic In the one instance a genic toxin or drug and in the

26 International Clinics III series 16
27 Semon Jour of Cut and Vener Dis. 1884 vol xi p 146

toxin or drug That pneumonia, spotted fever and malaria should be so frequently accompanied by herpes and typhoid fever, smallpox and other exanthemata so rarely, can not in the present state of our knowledge be explained It certainly seems reasonable to attribute the herpes to some peculiar quality of the associated toxin

It must, of course, be remembered that some persons are peculiarly subject to simple herpes, accompanying coryza, gastric disturbances and other mild indispositions (see illustration) In such individuals there may be an unusual susceptibility of the nerve tissue to the action of toxins which in other persons might produce no herpetic outbreak Certainly the well-established association of herpes with the three infectious diseases mentioned can not be explained on the basis of personal idiosyncrasy, for it is too well demonstrated by the extended observation of experienced clinicians in all countries

In considering the diagnosis of a disease in which herpes develops, it is well, however, to obtain from the patient or his relatives some history as to the previous occurrence of herpetic attacks

CONCLUSIONS

1 Herpes zoster and herpes simplex—both the facial and genital varieties—while not clinically identical, are closely related The histology of the cutaneous lesions and the observed changes in the nerve structures examined appear in all to be practically the same

2 It is highly probable that the vast majority of all cases of herpes of the various types are the result of the action of a toxin This proposition necessarily assumes the infectious origin of herpes

3 The frequency of herpes simplex in certain infectious diseases and its rarity in others is evidence that the toxin must possess certain peculiar qualities in order to exercise a selective affinity for sensory nerve structures

4 The toxins producing herpes simplex and herpes zoster are in all probability not the result of the action of any specific micro-organism This is certainly true of the former and by analogy may be assumed to be true of the latter disease

5 The three diseases in which an "herpetogenic" toxin develops with a fair degree of constancy are pneumonia, spotted fever and malaria Its frequency in these diseases and its comparative rarity in typhoid fever and many other infectious maladies make its appearance a symptom of considerable diagnostic import.

6 In view of the tendency of certain individuals to recurrent attacks of facial herpes from slight indispositions the fact as to such a history should always be elicited before according to herpetic outbreaks the diagnostic value referred to

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The Model Medical Society Paper—There is no doubt, says the *Jour of the Minnesota State Med Assn* that the model paper for a medical society or a medical journal is something very different from the average paper now prepared To define what shall be a model is difficult, but it is possible to name some of its characteristics It must contain something that will add to the general fund of medical knowledge and while this something may be contained in a paragraph, it may need a setting to give it clearness and emphasis Proper brevity is necessary both to maintain interest and to enhance its value Definition or clearness of outline must be a characteristic of everything one writes Combine these qualities in a subject of interest to the profession and we shall approximate a model paper

SOME UNUSUAL OCULAR MANIFESTATIONS OF ARTERIOSCLEROSIS *

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OPTIC ATROPHY

The first anatomic demonstration of the pressure effects on the optic nerve of sclerosed vessels at the base of the brain was made by Michel[1] in 1877 This case is unique inasmuch as the resulting ocular disturbance was bilateral choked disc which Michel explained by assuming pressure on the lymph spaces of the optic nerve.

From time to time since the publication of this case others have appeared in literature, but it remained for Otto[2] in 1893 to present a large enough series of cases to permit of conclusions being drawn as to the nature of the gross and minute anatomic changes and of their possible clinical manifestations In 11 of this group of 20 autopsies there were more or less marked changes in the form of the optic nerve consisting of a flattening and a subsequent atrophy of the nerve fibers, primarily centrally situated but later extending above and below, while in the two wings of the nerve thus formed the position and the relation of the nerve fibers remained normal He concludes that the atrophy is a pure pressure one without inflammatory phenomena and that this atrophy may progress in an ascending and descending direction He suggests that clinically simple slowly progressive optic nerve atrophy occurring in the aged may have this origin In a subsequent article (1901) Otto[3] adds 4 cases of sclerosis of the carotid and ophthalmic arteries the findings in which confirmed the original as to the nature of the atrophy and the varying location corresponding to the position of the affected vessels In all of these cases, so far as it was possible to determine, related ophthalmoscopic and functional changes were absent.

In 1891 Bernheimer[4] reported two interesting cases In one the nerve was divided into two unequal longitudinal parts by the pressure of the sclerosed carotid and ophthalmic arteries on its ventral surface In the second case the optic nerve was furrowed on its *dorsal surface* at the point where the dural sheath begins He expresses the view later again set forth by Otto He attributes the absence of clinical symptoms to the fact that in these cases the ophthalmic artery coursed parallel with the optic nerve fibers within the optic canal to its exit into the orbit, and that notwithstanding the marked changes, there could be no influence on the conductility of the nerve When, however, the ophthalmic artery takes a right angled tangential course relative to the long axis of the nerve, the fibers must be destroyed by the pressure and produce an atrophy corresponding in degree to the depth of the furrow

In 1902 Liebrecht[5] added 7 similar cases, all studied from an anatomic standpoint From a consideration of these and the previously reported cases he finds that the most frequent seats of injury to the optic nerve through arteriosclerosis are first within the fibrous portion of the optic canal by imbedding of the ophthalmic artery into the nerve parallel to its long axis, the second is at

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* Read in the Section on Ophthalmology of the American Medical Association at the Fifty seventh Annual Session June 1906

1 Arch f Augenheilk vol xiv p 39 Türck's case (reported much earlier) was one of compression of the optic nerve by the artery pushed upward by a tumor

2 Arch f Psych u Nervenk vol xxv p 579

3 Arch f Augenheilk vol xliii p 104

4 Arch f. Ophth vol xxxvii p 37

5 Arch f Augenheilk vol xliv No 3

the sharp free margin of the reduplicated dural sheath where it spans the nerve near the optic foramen (the nerve may be extensively compressed between this fibrous band above, and the ascending carotid below), the third lies midway between the canal and the chiasm, the place where the anterior cerebral artery above, and the carotid below, cross the nerve He says that as to the functional disturbance occasioned we have no positive evidence but it may be assumed that as the result of injury at the first point we would have either no functional disturbance or an atypically placed scotoma, at the second, an incomplete or a total transverse atrophy of the nerve with corresponding visual defect, at the third, the lesion and the functional disturbance would vary with the relative position of the two vessels He states that he has found some marked cases of diminished vision with no determinable cause which he would attribute to arteriosclerosis, and details one occurring in a woman 64 years of age where the atrophic process in the eyes had not taken place synchronously Vision was reduced to fingers at 2m, and the fields were irregularly contracted especially in the inner halves, almost to fixation.

In 1904 C S Bull[6] reviewed the subject and stated that while he had "no certain data corroborated by autopsy which would transform a theory into a fact he has for years been convinced that arteriosclerosis of the ophthalmic and internal carotid arteries may affect the optic nerve more frequently and seriously than we have hitherto suspected"

The following interesting case of optic atrophy, in which the prodromal symptoms were of a nature to warrant the assumption of arteriosclerosis as the primary cause of the degeneration, is recorded because of the expressed views of the above quoted distinguished observers and as clinical evidence to substantiate them

CASE 1.—Mrs A T, aged 43, married, has seven children, all girls She has had two miscarriages, one occurring between the births of the last two children and one since the birth of the last child.

History.—Aside from nasal catarrh and sick headache, which has become much less severe in the past four or five years, she was well until 15 years ago, when she had an attack of grip which left her with nervous prostration and insomnia, requiring the use of hypnotics About this time she had metrorrhagia which lasted several months Eight years ago she had a second attack of nervous prostration Eighteen months ago she began to have attacks of dizziness, accompanied by temporary blindness The blindness affected both eyes and lasted from five to ten minutes At first both eyes recovered fully, but later the lower half of the right field would be slow to recover This tardiness increased until, for a year past, this portion of the field has remained permanently blind The left eye has been going through the same process, the upper half of the field, however, being slow in recovering The visual disturbances occur at irregular intervals but seem more frequent during the menstrual period The patient's mother died of tuberculosis of the lungs at 38 years of age, her father of heart disease at 50 years of age She is in good physical condition except for a slight general arteriosclerosis Dr T H Weisenburg made a neurologic examination and found nothing abnormal.

Examination.—Examination of the eyes showed Irides prompt to light and convergence Convergence power weak Slight left hyperphoria Vision of R E 5/6 L. E 5/6 Fields as shown in the accompanying illustration (Fig 1)

Ophthalmoscopic examination R E., clear media Disc vertically oval and pallid especially in the upper half where it is decidedly atrophic Central physiologic excavation The superior branches of the central artery are very markedly contracted with accompanying white lines The corresponding vein is shrunken but not to so marked a degree The inferior branch is a trifle smaller than normal, but the accompanying vein is normal The scleral ring is sharply cut below and to the outside. The presence of arteriosclerosis is distinctly shown by the marked indentation of the inferior vein by the crossing artery (Fig 2) L. E, media clear Disc vertically oval and of a much better tint than that of the other eye, although the lower outer half is decidedly gray The arteries are slightly reduced in size The veins are also a trifle small, this being especially so of the inferior branch The scleral ring is sharply cut in and out.

Treatment.—The patient was given potassium iodid in five grain doses, strychnin 1/30 gr and nitroglycerin 1/100 gr three times a day Pearls of nitrite of amyl were ordered with directions to use them at the onset of the attacks Two months later she reported having had but two attacks of blindness, both slight as compared to former ones Four months later she stated that she had had no further attacks of total blindness, but had had spells of 'swimming of the sight," lasting from three to five minutes, involving the whole field, and recently in the L. E a sector defect of almost total darkness extending from fixation upwards and outwards, lasting about thirty minutes and disappearing gradually

That the theory advanced for the causation of the atrophy in this case shall be upheld, it is necessary that not only should it accord with present conditions but that by it the various remarkable phases through which the case has passed may be satisfactorily interpreted

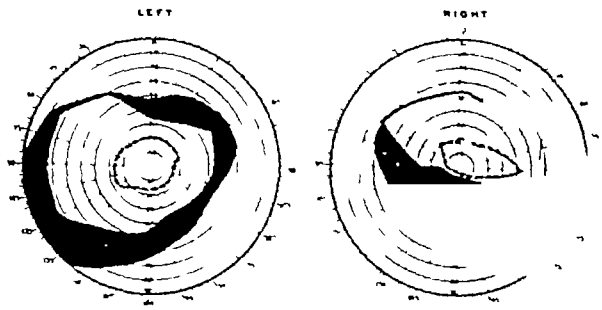

Fig 1.—Fyefields in Case 1

As seems well established, in the early stages of arteriosclerosis of the smaller vessels a spasm of the vessels may from time to time occur or during periods of low blood pressure collapse of the vessel may take place If this occurred in the ophthalmic artery or certainly if in the central artery of the retina it would produce a transient blindness of the whole field (It is claimed by some writers that, owing to the free anastomosis between the ophthalmic artery and the branches of the internal carotid, especially the facial, obstruction of the ophthalmic artery could not produce blindness) This would account satisfactorily for the first symptom

It has been shown that with sclerosis of the ophthalmic or internal carotid artery pressing the nerve upward against the unyielding edge of the internal end of the fibrous canal a transverse pressure atrophy beginning above and finally involving the entire diameter of the nerve may occur This would explain how, later the vision was slow to recover in the lower field and finally the blindness in this area became permanent The advancing atrophy would doubtless at first impede the entrance of blood into this portion of the nerve and its conductility would but slowly recover When the atrophy became complete and the process crept deeper into the nerve the lower field remained permanent and (It may be that this sluggish return of [illegible] final

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blindness in the lower field did not take place until the atrophy had spread forward and squeezed the superior branch of the central artery of the retina. Reference to the illustration will show that the division of the artery has taken place in the nerve so that pressure might readily affect one branch earlier than it did the other (Fig. 2).

SPASM OF THE CENTRAL ARTERY OF THE RETINA

As early as 1869 von Graefe[7] recorded an instance of what he termed ischemia of the retina, the diagnosis resting on the presence of contracted arteries and blindness. The condition persisting unchanged for a period of 10 days, operative treatment in the form of an iridectomy on one eye and paracentesis on the other was carried out with a successful result, vision in one eye rising to normal.

In 1866 Rothmund[8] reported having observed the same clinical conditions in two young girls with a like fortunate outcome from operative interference. Some-

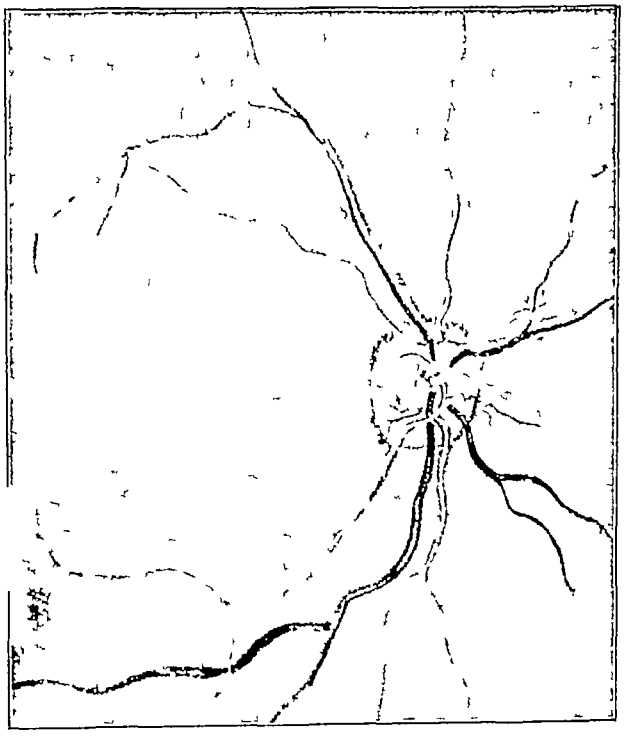

Fig. 2.—Fundus of R. E. in Case 1. Arteriosclerosis shown by indentation of inferior vein by the crossing artery.

what later, in 1874, Loring[9] published a similar case in a man having sclerosis of the aorta and hypertrophy of the left ventricle, in which recurring attacks of transient blindness resulted in permanent loss of sight. He believed that lowering of the blood pressure caused the attacks and that the final total blinding was due to secondary changes in the retina. Five years later Nettleship[10] attributed a similar case to lowered blood pressure.

Berger[11] was one of the first to assign to spasm of the central artery of the retina sudden blindness, he having assumed this to be the cause in a case of a woman 36 years of age, who had left hemicrania and recurring attacks of paresthesia and anesthesia of the left extremities, with blindness of the left eye, associated with pallid nerves and contracted vessels. Iridectomy was performed on the fifth day, with recovery of useful vision. Schnabel,[12], Galezowski[13] and Jäger[14] each report instances of intermittent ischemia of the retina which they laid to spasm. Galezowski's case terminated in thrombosis and atrophy. Schnabel's patient had also glaucoma, and Jager's was suffering from intermittent fever. Mauthner[15] and Moos[16] believed the cause of visual obscuration in their cases to have been due to emboli. Mauthner supposed the cause to be the lodgment of an embolus in the ophthalmic artery at the place where the central artery of the retina is given off. In Moos' case, besides the retinal disturbance, there was transient diplopia, transient enlargement of the liver, recurring pericarditis, endocarditis and embolism of the mesenteric artery. Walton,[17] Landesberg[18] and Siegrist[19] have observed spasm of the central artery of the retina in migraine, Knies,[20] Klein[21] and H. Jackson,[22] in epilepsy, and Raynaud,[23] Weiss[24] and others, in symmetrical gangrene of the extremities. Barrett,[25] Noyes[26] Nettleship,[27] Priestley Smith[28] and Posey[29] have all recorded instances of recurring, transient monocular blindness. Posey's cases were not dependent on the other possible causes which he gives for this symptom, namely, ciliary fatigue, glaucoma or migraine. Arteriosclerosis was present and the visual disturbance was assigned to spasm of the vessels. A very significant point brought out by Fischer[30] in his report of 5 cases of transient blindness is that in 45 cases of branch embolism recorded, transient total blindness, lasting from a few minutes to hours, preceded the final permanent limited blindness.

With this brief résumé of the cases in which the obstruction was, in nearly all, temporary and in which the cause was likely due, in some instances, to spasm, although this could only be surmised because of the presence of ischemia of the retina and because of the temporary nature of the functional disturbance, a personal observation in which the spasm of the central artery of the retina was repeatedly seen will be recorded.

On Nov. 23, 1905, I was asked by Dr. D. F. Harbridge of Philadelphia (to whom I am indebted for the privilege of reporting the case in abstract) to see the patient whose history follows.

CASE 2.—Mr. C., aged 49, stated that the day previously, while stooping, he noticed some difficulty with the sight of his left eye, and upon closing the right eye he found that the left was blind. The attack of blindness lasted about one minute. That day he had two or three subsequent spells. To-day he had four or five attacks in the forenoon, and between the hours of 2 and 4 p. m., while under observation, he had them as frequently as every half hour, and they lasted from one half to two minutes. The obscuration of the field begins in the

7. Arch. f. Ophth., vol. viii.
8. Klin. Monatsbl. f. Augenheilk., vol. iv, p. 106.
9. Am. Jour. of Ophth., 1874. (This and the following foot notes to 24 inclusive are referred to in Wagenmann's article Graefe's Arch., vol. xliv, but where possible the abstract was made from the original article.)
10. Brit. Med. Jour., 1897.
11. Michel's Jahrb., p. 350.
12. Arch. f. Augenheilk., xv, p. 370.
13. Rec. d'Ophth., 1882.
14. Abst. Graefe's Arch., vol. xliv.
15. Wien. med. Jahrb., vol. ii, 1873.
16. Virch. Arch., vol. xii, p. 58.
17. Journal of Nerv. and Mental Diseases, vol. xi, July.
18. Arch. f. Augenheilk., vol. vii, 1878.
19. Graefe's Arch., vol. xliv.
20. Bericht. d. Ophth. Ges., 1877. (Arch. f. Psych., vol. xx.)
21. Graefe's Arch., vol. xliv.
22. Ophth. Rev., vol. iv.
23. Arch. Gén. de Méd., 1874.
24. Wien. Klin., vol. i, 1882.
25. Ophth. Rev., 1902.
26. Text-book, 1899.
27, 28, 29. Posey, THE JOURNAL A. M. A., May 31, 1902.
30. Fischer, "Uber Emboli des Art. Cent. Ret., Leipzig, 1901.

periphery and is compared by the patient to the shimmer from ice clad trees or to the movement of biograph pictures. Finally the field becomes totally dark. The clearing up begins in the periphery of the temporal field and with the same accompanying phenomena.

History.—The patient is a strong stout man. Covering a period of one year he had severe attacks of vertigo seven years ago. In the spring of 1903 he had an attack of bronchopneumonia, followed by inflammatory rheumatism. Since the disappearance of the vertigo he has become subject to severe attacks of migraine occurring on the average of once in five weeks. Nine years ago he contracted syphilis. He has used liquor and tobacco to excess.

Dr. W. B. Stanton, who examined the condition of the patient's vascular system, states that there is no lung, kidney or heart lesion, but that there is a slight degree of sclerosis of the vessels. Dr. D. J. McCarthy reported that there is a symptom group suggestive of beginning tabes. The patient was given mixed treatment and nitroglycerin. Dr. Harbridge informs me that the attacks have become less frequent but that the optic nerves are becoming quite gray and that the retinal vessels are beginning to show evidences of arteriosclerosis.

Examination.—Ophthalmoscopic examination showed a moderate contraction and diminished caliber of the arteries and veins at the onset of an attack of blindness. When the blindness is complete the arteries become thread like and lose their reflex and the veins, especially the superior branch, become very narrow. After a brief period there is a gradual refilling of the arteries and veins the latter becoming greatly distended, particularly the inferior branch. During the last attack that was observed, the last of a long series occurring at half hour intervals, there appeared to be some additional haze about the disc. There were never any marked changes. The pupil dilated synchronously with the loss of vision, and for a while after the attack exhibited hippus.

Dr. Harbridge will report the case in detail.

The opportunity of reporting this phenomenon is probably unique as a search of the literature discloses but 3 similar cases. One by Wagenmann,[31] who also was fortunate enough, on a single occasion, to observe the cycle of oncoming spasm, occlusion and relaxation of spasm. The second case is that of Benson,[32] who examined ophthalmoscopically a case during the existence of total blindness and during attacks of partial blindness. The third was that of Sachs[33] who observed spasm of a branch of the central artery of the retina. Wagenmann's case briefly is as follows:

> A man, aged 69 years, had for some months noticed frequent, and of late, almost daily attacks of blindness in the right eye, lasting from a few minutes to a few hours. He had had epileptiform attacks in childhood but was now healthy except for arteriosclerosis.
>
> The changes observed were that at one time perception of light was gone, and with it direct and consensual pupil reaction. Externally no change. Ophthalmoscopically, disc pale, arteries appeared as short streaks in which no blood columns could be seen, even with the direct method. Veins thread like. No pulsation on pressure. Soon the retina became cloudy and the fovea stood out as a round red spot. About ten minutes after the beginning of the attack a red line was seen by the indirect image to appear in the upper arc, and immediately afterwards the veins became larger. Meanwhile the patient had perception of light, and the pupil dilated a little. In a few minutes the circulation, and with it vision, was completely restored."

31 Graefe's Arch., vol. xlv.
32 Report Internat. Ophth. Congress, 1876.
33 Beitrag. z. Augenheilk., viii, 1879.

Following is an abstract of the case of Benson:

A man, more than sixty years old, in good health, had had numerous attacks of transient blindness, sometimes coming on after meals, sometimes coming only a few hours after the last. During an attack of complete blindness the patient was examined ophthalmoscopically. [illegible] of the arteries of the retina. The [illegible] of the patient was found to be large, and it was [illegible] during the blind period. The [illegible] were small. [illegible]

Some [illegible] of Benson's

In the [illegible] a similar occurrence would take [illegible] the patient [illegible] and [illegible] by the [illegible] to [illegible] a lessening of [illegible] The [illegible] of this [illegible] [illegible] of the [illegible] The [illegible] arteriosclerosis.

[illegible]

vened between the onset and recovery, and in the case of Noyes, where repeated previous attacks of transient blindness authenticated the cause as a vascular one, blindness persisted 16 hours with recovery, and recently Barrett recorded an instance where the attack lasted two hours with a return to normal vision It would seem that in these cases sufficient circulation remains to sustain the anatomic integrity, but not the functional activity of the retina

Prognosis—In considering the prognosis of transient blindness a distinction should be made between those cases where the attack is but a symptom of a general condition in which spasm is a feature, as epilepsy, Raynaud's disease, migraine and the ague of intermittent fever, in which the prognosis is good, and where it is due probably to a local manifestation of a general vascular disturbance in which the prognosis is grave In the latter class the danger lies mainly in the secondary effect of the spasm, for, excluding the cases in which a reasonable doubt may exist as to the cause of the ischemia, there yet remain several cases in which, although the blindness lasted for many hours, a full recovery of retinal function followed

Treatment—The indications to be met are those of early arteriosclerosis, high arterial tension and spasm The only drug that has secured any standing in combating this insidious affection is the iodid of potassium It is to be given in doses of from 3 to 5 gr three times a day in large draughts of water after meals so soon as there is any indication of capillary fibrosis, and is to be continued in interrupted courses thereafter It should be needless to add that moderation in eating, drinking, exercise, pursuit of business and pleasure is more essential than regularity in taking medicine

The nitrites are potent in reducing arterial tension Nitroglycerin commends itself because of its convenience in administration Nitrite of amyl, by reason of its quick action, is especially indicated for the attack, but frequently appears to have but little effect in modifying

Heart tonics are usually called for to improve the circulation The value of massage of the eyeball has been demonstrated in the treatment of cases exhibiting the symptoms of obstruction and should always be tried

The question of the advisability of performing an iridectomy must be decided for each individual case We have seen that recovery has followed alteration of circulation brought about by performing paracentesis of the anterior chamber and that iridectomy has failed in the one case of undoubted spasm in which it was done The performance of an operation whose action is problematic for the relief of a condition which, if not problematic, is perhaps only the local expression of a general condition will not appeal to every one It would seem that the operation might be justified where the obstruction had resisted the usual means employed for relief until permanent injury to vision was likely to result But that it would guard against subsequent attacks is scarcely to be expected

1819 Spruce Street

DISCUSSION

DR D J MCCARTHY, Philadelphia confined himself to a consideration of the subject of arteriosclerosis of the central nervous system With reference to the first of these cases he called attention to some observations of his own as to the relation of the internal carotid artery after it reaches the brain It must be remembered that it passes through a bony canal which prevents any extension of the pulse wave this being more or less of a conservative provision of Nature to prevent a high tension pulse wave doing damage to the delicate nervous structures Dr McCarthy thinks that in cases of hypertension leading to arteriosclerosis the first pathologic manifestation is a dilatation immediately inside the canal where the internal carotid passes into the skull cavity and that the main factor in the disturbance of the optic nerve is the relation of this dilatation to the optic chiasm In regard to the second case, spasm of the retinal artery, the question comes up, he said, of whether or no there was cerebral arteriosclerosis Of course, the examination of the eye is the best test of this, but the history of the case has to be taken into consideration The fact that there may be arteriosclerosis confined to the cerebral vessels without general arteriosclerosis has been demonstrated In one of Dr McCarthy's patients who suffered with attacks of migraine, examination of the brain showed extensive arteriosclerosis with no general systemic trouble Contraction of the retinal artery has been observed in attacks of migraine Experiments have been performed of tying off vessels to vary pressure and it has been found that changes in tension give rise to localized arteriosclerosis The migraine attacks might be sufficient to account for a localized arteriosclerosis in the retinal vessels

CONSERVATISM IN THE TREATMENT OF INFANTS WITH HARELIP AND CLEFT PALATE *

GEORGE V I BROWN, A B, D D S, M D, C M
MILWAUKEE, WIS

The advent of an infant affected with deformity of lip or palate, or both, brings directly to the parents and physician in charge, the urgent necessity of deciding whether immediate or at least early radical operation for the correction of the deformity shall be performed, or methods of treatment adopted that will admit of postponement of palate closure until a later period

With authorities openly divided on this question as they are, the decision must necessarily be a difficult one to determine, more especially since such cases are comparatively infrequent in the general practice of medicine and surgery

Fig 1—Infant with harelip not associated with fissure of the hard palate although there was cleft in the soft palate. In this case the usual order was reversed, staphylorrhaphy performed with perfect result and lip closed after strips had straightened the nose.

My practice being limited to this field and necessarily covering a somewhat extensive territory, the opportunity to observe both the effects of treatment according to my own system on infants under widely different, often extremely difficult conditions, and the result of operations by others in their influence on the appearance and development of patients in later life is such that I feel warranted in bringing forward for your consideration at this time certain facts bearing on conditions common to all such cases, with suggestions of individual variations from time to time noticeable to meet the exigencies of which my own system of treatment has been designed

CLAIMS OF ADVOCATES OF EARLY OPERATION HARMFUL

The following claims made by advocates of closure of palate in early infancy are not in accord with my own

* Read in the Section on Stomatology of the American Medical Association at the Fifty seventh Annual Session June 1906 Part of the illustrations are omitted from THE JOURNAL but appear in the reprints

experience and the recorded results of many others in similar cases and appear to lead along lines that can not fail to be distinctly harmful if followed implicitly by operators generally for reasons that practical results here shown make clear Writers favoring early operations hold that the most desirable time for operation is within three months after birth, that there is less nervous shock because the nervous system of the child is not well developed and the child is not capable of receiving the same impressions that it would later in life, that there is better reaction and less shock in young children because of less alarm and dread, that there is less deformity, for they claim all the tissues, bony as well as soft, develop naturally and according to accepted types, and that there is development such as will allow normal speech to follow when the child reaches speaking age

ESTIMATE OF INFANT MORTALITY FROM EARLY OPERATION MISLEADING

Any estimation of the mortality results of early operations on harelip and cleft palate infants must necessarily be misleading for large numbers of them do not live beyond the early periods of infancy Many die from inanition in spite of good care and carefully selected nourishment, even though no surgical operation be attempted, and it is hardly reasonable to suppose the percentage of fatalities would be decreased by the addition of surgical operation in every case

In the development of the human embryo there is co incident development of other parts at the stage which determines the form and character of lip and palate Naturally, causes which may happen to be responsible for arrest of development in this particular region might also be expected to cause arrest of development in other parts of the individual External evidence of this is frequently noted Many infants placed under my care or brought to my notice have had more than the usual number of fingers or thumbs or they have been totally deaf from birth or otherwise defective and this as might be expected is quite in accord with the results of investigation by Talbot and others along these lines Internal defects manifest themselves in insufficient vitality or inability on the part of one or more of the organs of the body to perform natural function with sufficient energy to sustain life, and this entirely outside of the question of difficulty in taking nourishment which can be corrected by application of strips as well as operation and with more safety

SUSCEPTIBILITY TO TOXEMIAS IN INFANCY

The total deaths in Chicago during the year 1905 were 27,212, of these, 5,631 were under one year or about one-fourth of the whole number of deaths of all ages and from every cause Does it seem reasonable that grave surgical operations during the first few weeks or even months would have reduced this number of infant deaths, considering that the number between one and five years was less than half as many, which in consideration of the larger number would reduce the proportion to approximately one-eighth? Does it not appeal to reason that there must be a vastly greater resistance to disease and injury of every kind after one year than previously?

This truth might be corroborated in many ways, but the following quotations seem to bear directly on the subject as to call for repetition Christopher[1] says

At birth the child is a very incomplete human being Its anatomic deficiencies are obvious Its physiologic or chemic deficiencies are less obvious, but more important Attention is often called to the crisis through which the child pas at birth when its heart changes from a three chambered to a four chambered organ Yet this is trifling compared to the crisis which occurs when the first food enters the stomach and that organ suddenly assumes new functions when products of the digestion reach the liver and that organ commence a series of new and untried chemical proce se when the products from this organ in lead of these from the old practical and well developed liver of the mother start on their way through the circulation to do good or harm

It would be ab urd to suppo e that the phy iologic proce es of the newborn baby are completely developed when the anatomic elements are so markedly deficient W know positively that these proce es are not the me a those of the adult It is because of this incompleteness tha autotoxemias occur and this also explains the greater freque of au toxemias in childhood than adult life and still greater frequen in infancy

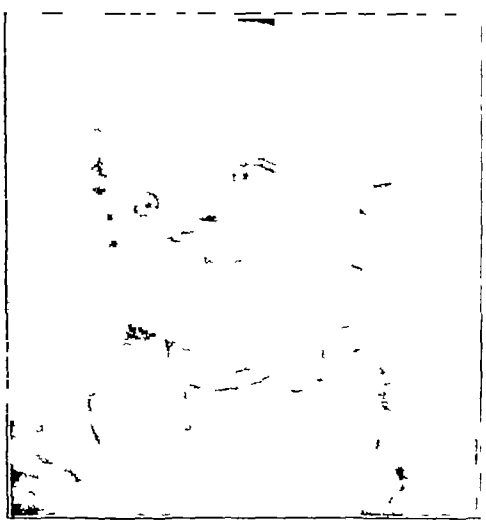

Fig 2.—Same infant shown in Figure 1 after closure of both lip and palate

Fig 7.*—Baby with single harelip showing more marked maxillary and nasal irregularity and with wider palate fissure than the previous illustrations

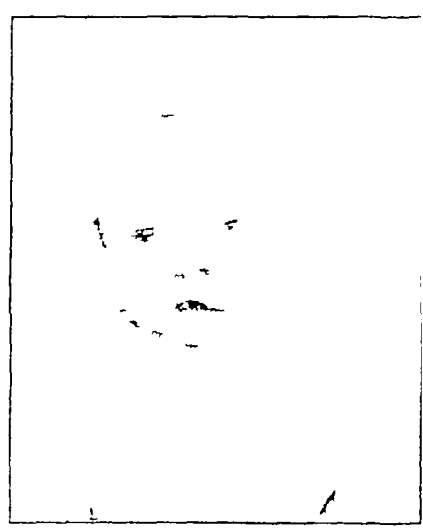

Fig 8.—Same child as in Figure 7 after operation

1 Chri [illegible] W [illegible] f [illegible] T [illegible] s
M A V I XIII [illegible] 17

In a summer's experience with infantile diarrhea, J H Knox[2] gives a table showing susceptibility of infants to dysentery from birth to 24 months and older The average shows 14 or 18 cases during the first year to one at 24 months or older The tabulation indicates emphatically the great susceptibility of children during the first year to invasion of dysentery bacillus He states that after the first year the susceptibility to these

Fig 11.—Boy four years old double harelip with characteristic deformity by muscular action

disorders is rapidly reduced, although exposure to the infection is probably as great

ORDER OF CLOSING LIP AND PALATE WHEN BOTH ARE INVOLVED

While it is undoubtedly true that with the lip fissure open operation may be more easily performed on the palate by one accustomed to operate in this field, the advantage is not of much importance as no serious difficulty is experienced in securing all the space necessary

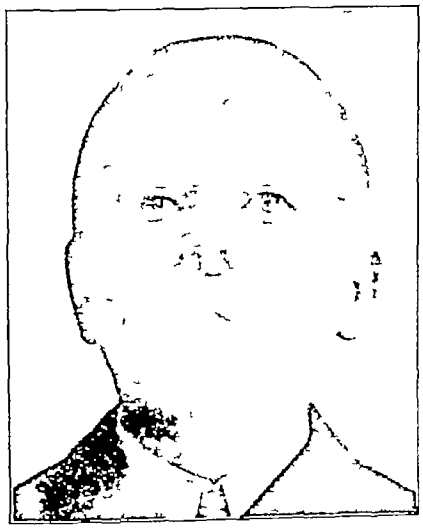

Fig 13.—Face of boy showing in front view result of imperfect early operation apparent in deformed nasal form almost complete nasal stenosis arrest of maxillary development due to loss of premaxillary structures and anterior permanent teeth, upper lip too long and badly marked with deep scars eyes staring on account of unnatural muscular tension.

2. Knox J H A Summer's Experience with Infantile Dysentery The Journal A M A vol xliii p 1849

for rapid use of proper instruments in mouths of which the lip has been properly closed On the other hand, the proper adjustment and fixation of the maxillary bones in their right relation, with additional value of better circulation for the nourishment of flaps secured by the closure of the lip borders and anterior portions of the palate, are by no means inconsiderable factors in leading to successful results when palate closure is performed

PERMANENT DEFORMITIES OF FACE

In addition to danger of early operations, serious permanent disfigurement of the nose and face is a matter of some moment, for interference with development of the teeth must affect the form of the maxillary bones and other osseous portions of the face, thus directly influencing the shape of the nares, the orbits and the palate It is axiomatic then that violent injury of any kind in early infancy, even though for the good purpose of palate closure, should only be a *dernier ressort* and at best can not fail to exercise a very serious and deplorable ill effect on the appearance, the general health and the character of the voice of the individual so treated

At the fifth week of embryonic life the germs of developing teeth have already begun to assume distinctive form and at birth both deciduous and permanent sets are far along toward development That arrest of, or other interference, with development of the maxillary bones must interfere seriously with the regular process of eruption of these teeth in due form at the proper periods is generally admitted, but the relation of the proper arrangement of the successively erupting dental organs to the form of the face, the oral cavity, the nares, the orbits, as well as more indirectly on the development of the individual, is such as to demand most careful consideration before surgical disturbance is attempted Development of the posterior portion of the palate in such cases through the new growth of the upper jaw back of the first molar tooth sometimes shows a tendency to proceed along normal lines, thus making an attempt to give proper width to the palate at the posterior portion of the hard palate, but the incisor cuspid and even bicuspid regions must of necessity suffer arrest of development in marked degree from the previous crushing in early infancy This not only applies to those so treated for palate closure, but is evidenced in all persons who have suffered accidental injury before or during the period of eruption of the deciduous teeth Any injury in fact that disarranges the occlusion of the growing, permanent teeth so that they are in lingual instead of buccal or labial occlusion with their antagonists in the lower jaw will have the same effect

Fig 12.—Same boy shown in Figure 11 after operations to bring pre-maxillary back to place and lip closure The teeth of this patient now form a very good upper arch

NASAL STENOSIS

Stenosis of the nares is also a vital matter in consideration of development Those familiar with the various typical forms of palate fissure know that in a large proportion of these cases it is a physical impossibility to

close the cleft by immediate pressure of any kind wi
out bringing the opposite side of at least one nari
absolute contact, and in any case the nasal opening m
be very much narrowed on one or both sides

The question of partial or complete stenosis o
nasal passages and the natural ill results of n
breathing concerns as every one knows, general as
local development and general health besides, an
though partial nasal improvement may be exp
growth increases, there can never be a normal co
in that respect The proof of this statement is
everywhere, for in otherwise normal individual
tions of contracted dental arches and high palat
to mouth breathing, enlarged turbinates, spur
trophic and atrophic rhinitis are too well unde
too apparent in daily rhinologic practice to
further question

EFFECT ON SPEECH

This leads to the final claim for better sp
viduals affected by nasal catarrh do not have
ing voices, nor do those who are mouth br
marked nasal obstruction, nor do those a
contracted irregular dental arches and abno
contracted palates Not only is this true

Fig. 17.

Fig. 17.—Front view after operation on
relation and removal of scar tissue for same
of unnatural muscular action.

Fig. 18.—Side view of [illegible] years of
plan of forcing the maxillary and palate bone
was also closed. There is one side of the
tissue that had the maxillary bone in contra
may be noted with a compensating depression
his nose.

Fig. 19.—Infant of three days [illegible]

very considerable part borne in word
by those influences, but in such case
vocal chords are very prone to affect
at all in the direction of the best spee
Even the development in form and
palate is not more assured than b
the reason given in my previous [illegible]
that more perfect plastic work [illegible]
geon in proportion as he realizes [illegible]
be deliberate in his work and [illegible]
coaptation of surfaces and exact
of opposing muscles. Progress [illegible]
field of surgery is more important
lorrhaphy, for the chief battle [illegible]

hemorrhage and other disadvantageous conditions which
tend to increase the difficulty of operation in this neces
sarily somewhat awkward situation as to make accuracy
practicable, notwithstanding the radical measures that
are imperatively required to secure the best results

A little study of the cases here represented and the
range of temperature in spite of the great care given,
before and after operation, as well as the comparative
rapidity with which the operations were performed
through the use of specially designed instruments,
preparation of sutures and needles in advance, order in
the use of instruments, systematic nurse and rapid hand-
ling of sponges with minimum amount of anesthetic, all
to the least possible shock and against un-
favorable postoperative conditions will give a better un-
derstanding how severely the vital forces of infants and
young children must be taxed to secure the ideal
results that really mean benefit to speech I ur-
become evident that had the infants on
operation only was performed been sub
more severe palate operation, the mortality
certainly have been different and sadly di

2 It prevents increase of deformity and further distortion of the face by unnatural muscular action

3 In laughing and crying the principal force of muscular action is applied to the most prominent anterior portion of the maxillary bones This, in double harelip and cleft palate, is on the projecting pre-maxillary, and tends to draw it backward The effect is the same in single fissure, for this pressure comes on the almost invariably excessive development on one side that may be noted as a marked characteristic of all such cases as shown by the illustrations With this as a point of resistance, the less developed maxillary on the opposite side is necessarily drawn forward, thus equalizing in greater or less degree the maxillary irregularity, and by this means tending to straighten the nose as well, while the general result of the muscular action is to make pressure in such manner as to bring the sides of the palate fissure nearer together, with consequent narrowing of the intervening fissures

4 The infant becomes accustomed to tension in this region, and is less likely to fight and struggle to free the lip after operation, thus marking of the lip by sutures is much less likely to occur

5 An infant learns to take nourishment much more naturally and easily with the lip thus placed in proper position

6 He learns to breathe with the wide opening, that would otherwise exist, properly closed, thus avoiding the possibility of insufficient oxygenation after operation, when his air breathing space will be necessarily reduced, and the need of air more than ordinarily required to throw off the effect of the anesthetic

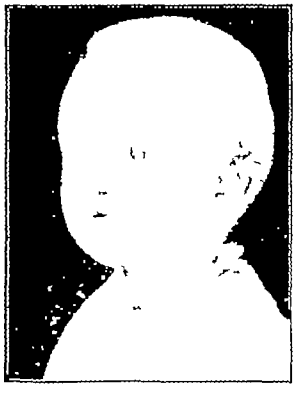

Fig 22.—Same baby as in Figures 19 20 and 21 shows facial expression correct muscular action and freedom from scar tissue at fourteen months

If accustomed to nurse or use the bottle with nipple the child is allowed to continue to do this until marked improvement is noted by increase in weight, character of bowel passages, etc, afterward it is gradually taught to nourish with a spoon The strips are changed from day to day, or as required, always with effort to make the tension greater as tolerance is acquired Usually it takes from ten days to two weeks to get an infant properly prepared and the unequal division of the jaw corrected with the anterior portion of the palate fissure drawn back sufficiently to make operation practicable though it is frequently advisable to wait until the infant is three or four months old in order to allow it to become strong and vigorous

The lip is then closed and the palate closure deferred until some period between one and two years old, preferably about one year and six months If at that age the child be strong and in good health the palate is closed throughout, but if otherwise, then the hard palate is closed and the velum allowed to remain until a little later, when having recovered from operative procedures the little one may be expected to endure this final operation with safety, because treatment that has preceded it will have so greatly narrowed the soft palate opening as not only to make the act of closing a less serious and dangerous one but it will also have improved the prospect of a full, flexible and useful palate after operation because of the decreased tension thus secured

When the child is strong and well nourished and the palate fissure is confined to the velum, the order given may sometimes be reversed and the palate closed first, because with the hard palate united there is no opportunity to reduce its difficulties by earlier operation as described and there is not the same advantage acquired by the use of adhesive plaster strips as when both hard and soft palates are affected

In the light of experience when successful surgical closure of cleft palate was at best a doubtful procedure, with the result much more uncertain than improved methods of operation have made it at the present time, such ill results as are shown in children now growing up who were subjected to the operation of crushing together the separated palate and maxillary bones for the purpose of closure of palate fissure in early infancy, seemed to be unavoidable in view of the choice between evils, but now that even the most difficult palate fissures can be closed at practically any age, jeopardization of young lives and the infliction of other deformities and disadvantages for the purpose of relieving the congenital one would seem to be quite unwarranted Whenever possible, infants brought to the hospital, and especially those that come long distances, should be prepared for operation, not alone by careful examination of urine, feces and other usual methods of physical examination, but also by having them accustomed to change of food and surroundings until, by daily weighing, it may be found that there is a normal increase in weight

Postoperative care begins with rectal injection of normal salt solution on or immediately after leaving the table This is repeated at intervals of two or three hours with the addition of alternative substitution of nutriment, according to conditions and indications A spoonful of warm water is given by mouth shortly after recovery from anesthetic If no ill results follow this is repeated in larger quantity with gradual cooling and increase in quantity, then liquid nourishment is given that has already been found by previous care to be beneficial to the individual in charge

Body temperature is sustained by external heat, especially hot-water bottle to the feet, and later temperature is regulated by cool sponging with alcohol and water, finishing with alcohol to cool fever, and young infants are rubbed with oil and wrapped in oil covering Many infants seem to be benefited by giving modified milk soon after operation without the more gradual preparations that older children and persons seem to require Great care is taken to stimulate the appetite, when, as sometimes occurs, there is lassitude with little or no desire for food A drop or two of brandy in a spoonful of water every two hours, or with older children, carefully prepared chicken broth of concentrated strength or beef juice will often start the physiologic mechanism to more active work

SUMMARY

1 The first care should be to get the infant in the best physical condition for operation

2 Delay until operation can be done with reasonable assurance of safety, but instead of allowing greater deformity to result from adverse muscular action during the waiting period as would otherwise be the case to utilize these forces, to reduce the fissures and correct the asymmetrical condition as much as possible, thereby simplifying the operative requirements and assuring better results

3 Subdivide the operative steps required for complete correction of the existing deformity in such manner as to make sure of the accomplishment of each essential portion with the greatest possible avoidance of shock and with accurate adjustment of the parts

4 A series of comparatively slight operations (not more than three to complete lip and palate) with sufficient intervals between them are less dangerous to the life of the little patient and undoubtedly tend to a highe raverage of perfect results than more radical measures

5 Get back into the circulation such fluid as may have been lost through hemorrhage as soon as possible by the aid of normal salt solution and nutrient liquids

6 Give the least possible amount of anesthetic consistent with avoidance of actual pain, and reduce length of time of each operation to the minimum by order in the use of specially fitted instruments and the rapid use of dry sponges

7 Convert difficult cases with palate fissures of unusual width into better operative form by mechanical and other means before final closure is attempted

8 Get the alimentary tract in order by cleaning thoroughly, by keeping the bowels open and by the administration of nourishing liquid food *per rectum* As soon as the stomach will bear it without exciting vomiting administer food by mouth and when appetite is poor stimulate with carefully flavored, nourishing food in concentrated form

9 Avoid the use of dangerous germicidal agents and depend chiefly on scrubbing and alcohol to cleanse the mucous membrane surface preparatory to operation Use applicators dipped in dioxogen to cleanse the palate surface in postoperative care

10 Watch respiration after operation to see that with the breathing space closed in an unaccustomed manner, there is sufficient oxygenation

11 Aim to avoid periods of stress and give sufficient intervals for recovery between operations and yet have both lips, hard and soft palate complete, before speech habits have an opportunity to become fixed

[FOR DISCUSSION, SEE PAGE 826]

THE ISCHEMIC PARALYSIS AND CONTRACTURE OF VOLKMANN *

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The immediate and remote effects of overtight fracture dressings on the muscles of the extremities, essentially a myositis, were first made known by Richard Volkmann[1] in 1875 Volkmann reported but one case of which we have knowledge This was in the lower extremity and is one of two cases cited here, the remaining fifty of the fifty-two cases described in this paper involving the upper extremity Further, Volkmann's patient was practically an adult, his age being 16 years, and, as will be shown below, the lesion which is known by Volkmann's name is pre-eminently one of childhood, the great majority of patients being between the ages of 3 and 12, while in turn the greater number of these were between the ages of 5 and 10

In 1884 Leser[2] published a short monograph on the subject, reporting no less than seven clinical cases He also investigated the matter experimentally by studying the effects of tight bandaging on the limbs of animals While he did not succeed in bringing out the type of affection known to us to-day, his work is sufficiently important to entitle him to share credit with Volkmann and many German authorities designate the affection as the Volkmann-Leser paralysis and contracture The description of the condition as generally set forth is based largely on Leser's work This author appears to have taken little thought of the possibilities of operative treatment His patients were not subjected to any surgical measures (save one in whom a pseudoarthrosis was incidentally corrected), and he seems only to have suggested that something might be accomplished by forcible stretching of the paralyzed and contractured flexors under general anesthesia

Isolated cases were reported by Sonnenkalb[3] (1885), Petersen[4] (1888), Niessen[5] (1890), two cases), Hildebrand[6] (1890), Davidsohn[7] (1891) and Pingel[8] (1892, two cases) In 1893 Keferstein[9] published a monograph on the subject, adding no less than seven hitherto unreported cases

During the decade which followed the appearance of Leser's monograph it had become apparent, first, that the Volkmann-Leser type of ischemic muscular paralysis due to overtight fracture dressings did not differ essentially from the ischemic lesions resulting from embolism and thrombosis and from cold, and, second that pressure lesions might arise from nerve compression—especially after the use of the Esmarch bandage—which bore no relation whatever to the typical Volkmann-Leser affection, the latter being particularly myogenic in origin and in no wise influenced by injury of the nerve trunks It was shown that injury from nerve compression led to a flaccid type of paralysis, which differed radically from the myogenic form But little advance in treatment was made during this period Leser's suggestion to use forcible stretching of the flexors under general anesthesia seems to have been utilized In Davidsohn's case reported in 1891, the flexors were lengthened This appears to have been the first attempt to relieve the condition by a cutting operation, but this must have been thought of minor importance, for in the cases collected by Keferstein in 1893 we find no mention of surgical intervention proper

In 1896 Henle[10] reported a case in the practice of his chief, Mikulicz, in which the forearm bones were resected with good effect It is rather strange to note that at the time when German reports of these cases cease a series of English observations began with a case reported by Battle[11] in 1896 While the English surgeons were aware of Volkmann's pioneer study in 1875, and while they made use of his name in describing the peculiar state of affairs which follows the application of overtight dressings for fractures, they appear to have been ignorant of the work of Volkmann's successors we nowhere find mention of the important monographs of Leser and Keferstein nor, indeed, of any other German reporters

* Read in the Section on Surgery and Anatomy of the American Medical Association at the Fifty-seventh Annual Session June 1906

1 Volkmann Krankheiten d. Bewegungsorgane Pitha Billroth Handbuch d. Chir vol II No 2 p. 846

2 Leser Volkmann's Samml Klin Vortr 1884 No 247

3 Sonnenkalb Deutsch med Wochft 1885 No 17 p 270

4 Petersen Arch f Klin Chir 1888 vol xxx No 3 p 677

5 Niessen Deutsch med Wochft 1890 No 37 p 761

6 Hildebrand Deutsch., Zeitsch f Chir 1890 vol xxx p 95

7 Davidsohn Inaug. Diss., Erlangen 1891

8 Pingel Inaug Diss. Greifswald 1892

9 Keferstein Inaug Diss Göttingen 1893

10 Henle Centrbl f Chir., 1896, No 19

11 Battle Trans Clin Soc. London 1896 vol xxix

The English surgeons seem to have taken cognizance chiefly of the deformity which results from the condition Their writings deal principally with an orthopedic lesion in which the causation plays a minor part in the prognosis and treatment

Battle's pioneer British case in 1896 was soon followed by others Dunn[12] (1897), Johnson[13] (1898), Davies-Colley[14] (1898, two cases), Owen[15] (1898), Clarke[16] (1899), Page[17] (1900), Littlewood[18] (1900, two cases), Wallis[19] (1901), Barnard[20] (1901, two cases) In studying these reports we are struck with the fact that the British surgeons were chiefly concerned with a deformity which they sought to correct by orthopedic methods The cases came to light because such methods were employed to remedy certain deformities and disabilities, the causation of which was mentioned only incidentally Dudgeon,[21] in 1902, was at pains to collect the scattered observations He tabulated these, adding hitherto unpublished observations which dated back to a period at which no surgical intervention was practiced In the following year (1903) he reported three additional cases

Fig 1 —Ischemic paralysis of Volkmann Condition at end of five months.

During the same year (1903) Edington,[23] of Glasgow, reported three Scotch cases, and in 1905[24] Rowlands wrote a short monographic article on the subject This was based on Dudgeon's study, to which was added a personal case

The only articles which I am able to find in American literature are those of Bernays[25] (1900) and Ferguson[26] (1906) The former called attention in a forcible way to the importance of the subject. The latter reports the result of two observations in which lengthening of the flexor tendons of the forearm was followed by marked improvement

My personal contribution to the subject is as follows

12. Dunn Guy's Hosp Gaz 1897 vol xi p 11
13 Johnson Lancet 1898 No 1 p 722
14 Davies Colley Guy's Hosp Gaz 1898 15
15 Owen Ibid
16 Clarke Orthopedic Surgery 1899 p 49
17 Page Lancet 1900 No 1 p 83
18 Littlewood Ibid p 201
19 Wallis Practitioner 1901
20 Barnard Lancet 1901 No 1 p 1138
21 Dudgeon Lancet 1902 No 1 p 78
22 Dudgeon Trans. Clin Soc. London 1903 vol xxxvi p 251
23 Edington Glasgow Med. Jour 1903 vol lix p 417
24 Rowlands Lancet 1905 No 2 p 1168
25 Bernays Boston Med and Surg Jour vol cxlii p 539
26 Ferguson Ann of Surgery vol xliii p 599

CASE 1 —X., male, aged 17, a miner by occupation, came under my observation Aug 16, 1905, with the following history

History —Family and personal history were negative On Aug 7, 1905, nine days before I saw him, he received, while in Mexico, a stab wound at the upper outer side of the right forearm The wound bled freely He was taken to a hospital and an Esmarch bandage was applied with a fair degree of snugness from the wrist to the shoulder This bandage remained in place from 9 a m until 10 a m on the following day There was a moderate degree of pain in the hand and forearm but this pain was not excessive, the hand underwent moderate swelling On removal of the Esmarch bandage an operation was performed under an anesthetic. The nature of the operation is unknown. On recovering from the anesthetic the patient found the forearm in anterior and posterior splints and enveloped in dressings held in place by an ordinary bandage rather snugly applied, a considerable degree of pain in the forearm and hand followed The splints were left in place for three or four days On their removal blebs were found in several places on the forearm, wrist and hand, there was moderate swelling in the hand and he was unable to move the fingers, he does not remember whether or not there was sensation in the fingers and hand After the removal of the dressing the forearm swelled rapidly and became painful During the last three or four days the swelling has gone down and the pain has markedly diminished.

Examination —Aug 16, 1905 The young man was up and about He looked and felt well His temperature and pulse were normal He had a good appetite. He carried the right forearm in a sling This forearm was the seat of a short, recent, healed wound on the antero external aspect a hand's breadth below the elbow The forearm was about the size of its fellow The hand was a little swollen and there was complete paralysis of all muscles below the elbow The patient could not move the fingers or wrist in the slightest degree, there was complete anesthesia below a point a little below the elbow There was no electrical reaction whatever in any of the muscles of the forearm or hand to either the faradic or galvanic current, a radial pulse was present

Diagnosis —Ischemic paralysis with coexisting pressure neuritis Very gentle massage and a mild faradic current were advised.

Course of the Disease —During the next few days the fingers showed a tendency to contract They were extended and the forearm and hand were loosely bandaged to a light posterior splint. The only improvement which took place was a gradual return of sensation in the forearm

Under date of Jan. 5, 1906, I find the following notes Patient seen to-day with Dr Edward Delehanty, he has had massage and electricity to the forearm and hand constantly, but there is not the slightest return of motion, sensation has returned to a point a little above the wrist. Flexion and extension at the elbow are normal but there is less power than on the opposite side, the fingers and wrists can be moved passively, this has been done daily, passive pronation and supination of the forearm are possible to but a very slight degree The forearm is smaller than its fellow, it is rather rounded, its muscles, especially those on the anterior surface, are hard and board like, there is complete loss of electrical reaction both to the faradic and galvanic current in all muscles of the forearm and hand. Measurements of the circumference of the two limbs are as follows two inches above the styloid process of the radius the right side measures 5¾ inches, the left side 6¼, five inches above the styloid process the right side measures 7 inches, the left side 8½, at the junction of the upper and middle thirds of the forearm the right side measures 8¼ inches, the left side 9½, at the middle of the arm the right sides measures 8½ inches, the left side 9¼ The hand is shiny but not swollen, the hand and fingers have been on a posterior splint and are in complete extension I am impressed by the hard, board like rigidity of the forearm muscles It seems to me probable that a fibrosis locks the forearm bones, thus preventing passive pronation and supination No operation seems indicated" (Fig 1 represents the arm at this time)

I examined the patient again Feb 2, 1906 There was no change He left the hospital of his own accord about April first, after six months' residence. During this time he had had constant attention There was no improvement whatever at the time of his discharge. No muscles of the forearm or hand responded to any electrical current. A bad prognosis was necessarily given. Contracture would doubtless have gone on in this case had not the limb been placed on a splint when it commenced

Note, December, 1906—This patient re-entered the hospital in the service of one of my colleagues Since I last saw him the forearm has become smaller and harder, the fingers are markedly contracted The hand is a claw hand. He has little motion at the wrist, a trifle of motion in the thumb, practically no motion in the fingers The picture is a classic one At the hands of the surgeon whose service he entered he was subjected to an operation in which an attempt was made to free the median and ulnar nerves Both nerves seemed thickened, below the elbow they were buried in the dense tissue of the forearm An excellent opportunity was afforded to examine the forearm muscles themselves They are hard and fibroid, muscle tissue is replaced by a fibrosis Sections were taken from these muscles and handed to Dr J A. Wilder, professor of pathology in the University of Denver, for microscopic examination. Dr Wilder reports as follows

"Examination of Muscular Tissue—The tissue is pale red in color and very tough and fibrous Part of the tissue was fixed in formalin, part in Marchi's fluid, imbedded in celloidin. Histologic examination of the sections shows a great hyperplasia of connective tissue around and between the bundles of muscular fibers and in some areas between the individual fibers as well This connective tissue is dense and consists chiefly of many adult fibers containing a moderate number of blood vessels, most of which have well developed walls This fibrosis is so prominent that in many fields muscular tissue is not present, and where found it appears atrophic and fragmented Many of the fibers have lost their nuclei and transverse striations, having the appearance somewhat of broad ribbons of delicate fibrillar tissue Other muscular fibers and parts of fibers have a glassy, homogenous appearance with a marked affinity for the acid stains, their appearance and reactions being strongly suggestive of hyaline degeneration

"Osmic acid preparations show a moderate amount of fatty infiltration, which is more marked between the connective tissue fibers than between the muscular fibers Fatty degeneration of the muscular fibers is not found"

Feb 13, 1907 Since the operation in December sensation in the hand has improved somewhat, but motion of the fingers has not improved

ANALYSIS OF TABULATED CASES

Age—While in a few cases the exact age is not stated, there is reason to think that in at least 40 out of 52 instances the patients were between 3 and 12 years of age Over one-half of these were from 5 to 10 years of age Of the few remaining adult cases no patient was over 35

Sex—When sex is mentioned we find males 34, females 11 In the English series the sexes are about equally represented Nearly all the German patients were males

Location—Of 52 cases all but 2 were seated in the upper extremity The arm proper (including the elbow joint) and the forearm were involved in about an equal degree Lesions of the upper arm were limited invariably to the lower third It would seem that in the majority of the forearm cases the lesion was near the middle, both bones were usually involved In the minority of cases the lesion was seated in the upper or lower third of the forearm

Character of Injury—In the vast majority of cases this was a fracture

General Results Independent of Treatment—It is difficult to determine this Of 51 cases in which the result is stated we find complete failure in 10, some improvement in 14, and a relatively good result in 27 The latter implies more or less return of function Even in cases with a naturally poor prognosis time often accomplishes much In but few cases is the end-result noted

General Results as Based on Treatment—Operative procedures in the main are limited to cutting operations—tendon lengthening, resection of bone, and, in a few cases, tenotomy (the two lower-limb cases) and the resetting of badly healed fractures In 22 cases treated by operative procedure a good functional result seems to have been secured in the majority In 30 non-operative cases (simple tendon stretching being placed here) good results were secured in a minority only, and in several of these improvement was only apparent after many years of observation

This analysis is of limited value, since it takes cognizance only of certain data common to individual reports, many of which are very defective It covers the personnel of the patients, site and character of lesion, dressings, interval before operation when the latter was performed, character of operation and general results It is necessarily far from exhaustive

Lorenz,[27] who considers the general topic of muscle-ischemia, calls attention to those especial types which are due to arterial diseases (trauma, embolism, thrombosis, etc) and to cold These will be briefly reviewed in another place It is sufficient to state that in ischemia of the muscles due to any of these causes the symptoms and sequelæ are the same Clinical confusion is hardly possible if we bear in mind that the true Volkmann type results purely from over-tight dressings

The clinical features of the latter type are given by Lorenz as follows Soon after application of splints and dressings great pain develops, with swelling of the free portion of the extremity (the great majority of cases described concern the upper extremity only) The pains increase progressively, and if the bandage is not speedily removed the muscles soon become board-like and rigid At the same time a moderate degree of contracture sets in The limb is now paralyzed and the muscles are very sensitive Sometimes paresthesiæ appear A few hours after removal of the bandages the muscles swell, indicating the development of myositis In two or three days the swelling subsides, with gradual cicatricial contracture of the muscles This may lead to permanent shortening Volkmann saw high degrees of permanent contracture (nails boring into palms) However, contractures do not invariably follow There is a natural tendency to gangrene, with the cutaneous symptoms which precede the latter (coldness, insensitiveness subsidence of original pain, bluish-gray skin bullæ, etc)

If the muscles are injured to a certain degree destruction of them results To save the muscle in its entirety the cause must be removed within 5 hours for in about 7 hours the rigidity of the muscles already described supervenes This rigidity corresponds throughout to rigor mortis and when it is once developed the muscle is lost although it need not become definitely gangrenous Regeneration can not occur unless the circulation can be promptly restored The muscle if it can not undergo some degree of regeneration must atrophy with the production of cicatricial contracture

27 Lorenz "Die Muskelerkrankungen" Nothnagel's Handb d sp Pathol a Ther 1898

TABLE OF CASES—A—GERMAN CASES **

No	Reporter	Age Sex	Injury	Dressings	Interval before Treatment	Treatment and Results
1	VOLKMANN 1875	M. 16	No injury Hydrarthrosis of knee.	Posterior wooden splint.		Non-operative. Slow recovery from equinovarus deformity
2	LESER 1884	F *	Contusion of upper arm	Plaster-of Paris, arm flexed.		Non-operative. Slight improvement from medical measures.
3	LESER 1884	M. *	Fracture left upper arm, lower third.	Plaster-of Paris arm flexed.		Non-operative Passive motion and splints. Some benefit.
4	LESER 1884	M. *	Fracture right humerus close above condyles	Plaster-of Paris for 8 days		Non-operative. Slight improvement
5	LESER 1884	M. —	Fracture of humerus into elbow joint.	Plaster-of Paris for 14 days.		Non-operative. Very slight improvement.
6.	LESER 1884	M. —	Fracture of forearm in middle.	Plaster-of Paris for short time		Non-operative. Ultimate recovery
7	LESER 1884	M. †	Fracture of forearm in middle.	Plaster-of Paris for weeks.	Fourteen weeks (?)	Operative treatment of false joint resulting from fracture. Essential improvement
8	LESER 1884	M. †	Typical fracture of radius.	Plaster-of Paris for 5 weeks. Splints		Non-operative. Almost complete recovery
9	SONNENKALB 1885	M. 25	Fracture in middle of forearm			Non-operative. Deformity remains. Some use of hand
10	PETERSEN 1888	M. 4½	Compound fracture of humerus			Flexors repeatedly stretched under narcosis. Some improvement. Complicated by traumatic obliteration of brachial artery
11	HILDEBRAND 1890	F 5	Fracture of lower third of radius.	Anterior splint.		The badly united fracture was refractured. Later forcible stretching of fingers. Four years later recovery perfect.
12.	NIESSEN 1890	M. 10	Diastasis of lower epiphysis of humerus.	Volkmann's splint, removed 3 days later		Non-operative. Some improvement.
13	NIESSEN 1890	F 34	Fracture of styloid process of left radius.	Plaster-of Paris, followed by two splints for 6 weeks		Non operative. Recovered use of hand.
14	DAVIDSOHN (Hinecke) 1891	M 12	Fracture of right forearm, lower third.	Splints for several weeks.		Lengthening of flexor tendons. Good use of hand.
15	PINGEL 1892	M. 10	Probable fracture of humerus into elbow joint.	Plaster-of Paris, later splints		Non-operative, but slight improvement.
16	PINGEL 1892	M 6	Fracture of left humerus near elbow	Plaster-of Paris, removed next day		Non-operative. No improvement.
17	KEFERSTEIN 1893	M 25	Contusion of right forearm	Splints.		Stretching of flexors under narcosis. Good use of hand.
18	KEFERSTEIN 1893	M. 6½	Supracondyloid fracture of humerus.	Pasteboard splints, removed in 5 days.		Stretching of flexors under narcosis and use of splints. Withdrew from treatment. No improvement.
19	KEFERSTEIN 1893	M 8	Supracondyloid fracture of humerus.	Plaster-of Paris followed by splints for 2 weeks.		Non-operative. Recovered use of hand, with deformity
20	KEFERSTEIN 1893.	M. 9	Fracture of humerus into elbow joint.	Splints loosened on second day		Non-operative. Withdrew from observation.
21	KEFERSTEIN 1893	M. 5	Fracture at elbow joint.	Plaster-of Paris 4 weeks.		Stretching of flexors under narcosis followed by passive movements. Was improving when lost sight of
22.	KEFERSTEIN 1893.	M 10	Fracture of both bones of forearm	Splints.		Forcible stretching of flexors No improvement, but 10 years later had good use of hand, despite deformity
23	KEFERSTEIN 1893.	M. 9	Fracture of middle third of right radius.	Anterior and posterior splints, taken off in 48 hours		Forcible stretching under narcosis. Twelve years later, deformity persists Has use of hand.
24	HENLE (Mikulicz) 1896	M. 9	Fracture of right forearm	Plaster-of Paris followed by splints until consolidation		Resection of 1 5 cm from radius and ulna Wires tore through Good use of hand.
25	LYCKLAMA§ & NIJEHOLT 1904	M 7	Fracture of left arm	Plaster-of Paris		Non-operative Excellent functional results.

** I am indebted to Dr Edward Preble for valuable aid in the preparation of this paper
§ Lyclama & Nijeholt Nederlandische Tydschrift, 1904 vol. xl, p 1070

TABLE OF CASES—B—ENGLISH AND AMERICAN CASES

No	Reporter	Age Sex	Injury	Dressings.	Interval before Operative Treatment.	Treatment and Results
26	DUNN 1897	M 12.	Fracture of both bones of forearm.	Splints removed at end of week.	Ten months.	Untreated. Prognosis bad Extensive sloughing Nerves involved in scar
27	R JOHNSON 1898	M. 8	Fracture of lower extremity of humerus.	Wooden splints.		Excision of small pieces of bone at middle of radius and ulnar Only fibrous union. Has to wear splint.
28	DAVIES COLLEY 1898	F 6	Fracture of bones about elbow joint.		About two years	Forcible stretching under narcosis. Flexors cut or torn in two Extension splints Hand in good position, but no power to flex.
29	DAVIES COLLEY 1898	M ‡	Compound fracture of tibia and fibula.		About two years	Resulting equino-varus relieved by tenotomy of Achilles and flexors. Calf muscles originally injured Healing after prolonged suppuration
30	E. OWEN 1898	*	Fracture of upper part of forearm			Tenotomy of flexors. Result unsatisfactory
31	J J CLARKE 1899	M 6	Fracture of lower end of humerus.	Splints	Some months	Tenotomy of flexors. Deformity overcome. No mention of function.
32.	H W PAGE 1900	M 4¼	Fracture of lower end of humerus	Anterior and posterior splints in flexed position.	About six weeks.	Lengthening of flexor tendons all united being those of index. Good use of hand
33.	LITTLEWOOD 1900	F 8	Diastasis of lower epiphysis of humerus.	Internal rectangular splints.	Four months.	Lengthening of flexor tendons. Good use of hand.

* Child. † Adult. ‡ Boy

TABLE OF CASES — B—ENGLISH AND AMERICAN CASES—*Continued*

No	Reporter	Age Sex	Injury	Dressings	Interval before Operative Treatment	Treatment and Results
34	LITTLEWOOD 1900	F 6.	Fracture of lower end of humerus, radius and ulna.	Splint.	Seven months.	Lengthening of flexor tendons except flexor carpi ulnaris. Deformity corrected. Some power of flexion. Prognosis good.
35	H L. BARNARD 1901.	F 3	Fracture of radius and ulna about middle of shaft.	Anterior and posterior splints.	Nine months.	Lengthening of flexor tendons with use of extension splint. No mention of result. Prognosis good.
36	H L. BARNARD 1901	M 4	Severe contusion of upper part of forearm.	External angular splint.	Five months.	Pronator quadratus separated from ulnar attachment Arm supinated and fixed in splint. Prognosis good
37	F C WALLIS 1901	F 20	Congenital absence of superior radius ulnar articulation Operative fracture of lower third of ulna	Splints	One year	Lengthening of flexor tendons. Good use of hand. Esmarch's bandage used in operation but lesion was of Volkmann type.
38	W H BATTLE 1896	M. 12.	Fracture of forearm	Anterior and posterior splints		Attempt to lengthen tendons failed. Non operative treatment with some benefit
39	DUDGEON (Case of Clutton) 1902.	F 5	Fracture of humerus just above elbow	Anterior and posterior splints.		Non-operative. Result very bad.
40	DUDGEON (Case of Pitts) 1902	M. 20	Unknown.	Anterior splint for 5 weeks Plaster of Paris		Non-operative. Very slow improvement under massage etc. Deformity but good use of hand.
41	DUDGEON (Case of Pitts) 1902.	M 5	Greenstick fracture of right radius and ulna at junction of middle and lower thirds.	Anterior and posterior splints.		Non-operative. Gradual improvement under massage and voluntary motion No deformity and good use of hand
42.	DUDGEON (Case of Clutton) 1902	F 4	Fracture of lower end of right humerus.	Plaster splints.		Non-operative Gradual improvement under massage, etc. Deformity Some use of hand.
43	DUDGEON 1903	— 5.	Fracture of right upper arm, near elbow joint.	Plaster splints, arm flexed removed 4 days later		Non operative Very slight improvement.
44	DUDGEON 1903	M 9	Fracture of left forearm	Anterior and posterior splints for 3 weeks.	Two and one half years	Resection of from ½ to ¾ inches from both bones of forearm posterior aspect middle third Bones wired Great improvement. Several earlier operations nature and date not stated had failed to give relief
45	DUDGEON 1903.	M 8	Fracture of left forearm	Anterior and posterior splints for 5 weeks	One year	Resection of ¾ inches from radius and ulna. Ends wired. Great improvement.
46	EDINGTON 1903	F 4	Backward dislocation of right elbow	Poroplastic splint for 3 weeks	Three months	Tendon lengthening Results excellent.
47	EDINGTON 1903	F 7	Fracture of left forearm between middle and lower thirds.	Anterior and posterior splints for 6 weeks.	Three months.	Tendon lengthening Slight improvement.
48	EDINGTON 1903	F 32.	Septic process in right forearm when 15 years old.	Posterior splints, after multiple incisions.		Non-operative Permanent deformity and disuse
49	ROWLANDS 1905	F 6	Fracture of middle of radius and ulna.	Splints removed 3 days later	Four months.	Resection of radius and ulna, ¾ in. of each at different levels. Bones wired, position of hand corrected. Slight deformity Good use of hand
50	POWERS 1906	M. 10	Wound of soft parts of upper outer portion of right forearm. Some unknown operation done.	Splints left in place 3 or 4 days		Non-operative. Prognosis bad Esmarch's bandage was used in this case but condition was evidently due to splints. See history
51	FERGUSON 1906	M. 9	Friction of both bones of right forearm 4 years before	Tight splints	Four months	Tendon lengthening Marked improvement
52	FERGUSON 1906	F 12.	Fracture of left humerus at lower and middle thirds	Tight splints	Ten weeks	Tendon lengthening

When the injury and its results are slight or moderate, time and proper treatment will accomplish much Complete restoration of function is not unknown

In 1902 Dudgeon[21] attempted to collect the recorded material, but of the 15 or more cases which he gathered practically all had occurred in the practice of English surgeons in recent years, most of these saw the light as orthopedic cases (it is significant that the English write of Volkmann's contracture, not of Volkmann's paralysis) In addition to collecting cases, Dudgeon discussed the condition systematically and with especial reference to treatment Quite recently Rowlands has brought the subject to date, making free and acknowledged use of Dudgeon's paper As these authors seem unfamiliar with the later German work, what they say of the condition under discussion may be reproduced, their views being founded chiefly on the analysis of the English cases

Dudgeon defines Volkmann's contracture as a contraction of the fingers and sometimes of the wrist which comes on rapidly with loss of power usually about the elbow joint and chiefly in young children In all cases, save a simple instance of thrombosis splints had been applied for a fracture. In 14 out of 19 cases the splints caused sloughing The dressings were not necessarily applied too tightly at first, but no allowance was made for swelling Few patients complained of constriction, which shows that one can not depend on pain as a necessary symptom of over-tightness

Esmarch's bandage has been applied in some cases but in all of these it was followed by splints In nearly one-half the cases there was a fracture or diastasis at the lower end of the humerus, which leads to the suspicion that in some instances the brachial artery may have been compressed between the [illegible] and the end of the shaft of the h[illegible]

Surgeons who have had an opportunity to see the muscles agree that these are firm, pale and fibroid. While histologic confirmation is lacking it seems safe to assume that the lesions of the muscles are not secondary to those of the nerves The electrical reactions of the latter are generally normal The contractured muscles, when they retain power of voluntary motion, do not give the electric reaction of degeneration, when the tendons of the contractured muscles are lengthened the power of voluntary motion becomes apparent When Rowlands states that paralysis of the muscles does not appear, thereby indicating absence of injury to the nerves, he evidently refers to flaccid paralysis and not to mere loss of function

It is known that primary lesions of both muscles and nerves may co-exist, and it has happened that the latter have been found imbedded in scar tissue

Rowlands conjectures what had already been proven by Germans, viz, that the fibroid condition of the muscle is the result of a myositis It is evident that the entire muscle is not always involved, otherwise regeneration would be impossible Inflammation comes about as the result of the removal of the tight dressings, the blood thereby being allowed to congest the muscles In nearly all cases enough damage befalls the muscles to prohibit perfect recovery

The diagnosis of a recent Volkmann's contracture is unmistakable from the history of the case Paralysis and contracture set in simultaneously, electrical muscular reactions are generally lost Late ulnar paralysis may be simulated in old cases The latter may be differentiated by the loss of use, wasting, and lost electrical reaction of the small muscles of the hand (except those of the thenar eminence and the two outer lumbricales) Further, in ulnar paralysis the wrist is not flexed, and there may be sensory and trophic disturbances in the skin supplied by the ulnar nerve Other nerve paralyses—median, musculo-spiral, cerebral and spinal—can hardly be confounded with the Volkmann's contracture The latter, however, has been simulated in hysterical patients

In cases in which there is but little contracture the English authors employ massage and passive motion—if necessary, for two years Galvanism is not recommended Operative treatment must be instituted early, as it is of no service in old cases nor in any case in which the contracture is of high degree Passive motion under an anesthetic, as originally recommended by Volkmann, has been found worthless by the English

OPERATIVE TREATMENT

Operative treatment comprises tendon lengthening and resection of the bone The former has been well tested by Littlewood, Page and Barnard Tendon splitting with suture was the method employed The results were very good, although inherent difficulties are present, viz, slenderness of the tendons in young patients and the number of tendons which may need to be lengthened Non-union or the joining of wrong segments may result

Resection of bone seems a preferable operation. This was first done in England by Raymond Johnson, portions of the radius and ulnar being removed This takes less time than tendon lengthening There is no likelihood of injuring nerve trunks as there is in the latter operation In certain instances—I believe this possible in the case which I report—the patient may ultimately demand amputation of the limb

Prognosis is much better than Volkmann believed, but not as favorable as it was thought by Anderson While benefit is possible by non-operative treatment, the majority of cases demand operative intervention The prolonged management by massage, passive motion, active exercise, etc, so warmly recommended by Anderson ten years ago, is indicated after operation as well as in non-operative cases, and the proper combination of the two methods should insure the best possible result

That paralysis following the constriction caused by Esmarch's bandage is entirely different from the Volkmann lesion was conclusively shown by von Frey[28] in 1894. This author states that the Volkmann—or as he prefers to call it, the Volkmann-Leser—type of injury presents a sharply characterized picture The hand and fingers swell, violent, increasing pains are felt, involving the entire limb, the latter feels "asleep," and the fingers are numb Swelling and pain increase and the condition often leads to removal of the dressings If this has not been thought necessary, contractures of the hand and fingers begin to appear About 24 hours after application of the dressings the limb becomes rigid Voluntary movements are impossible, while passive motion causes intense pain On removal of the dressings the limb suddenly swells—the previously bandaged area undergoes a sudden and severe swelling which reaches its acme in about 48 hours It then gradually subsides, contracture appearing In moderate degrees of injury there is a certain amount of flexion contracture and the patient can not move the hand or fingers Nerve conduction is shown to be unbroken, although the strongest faradic current fails to contract the muscles, and only weak contractions are produced by galvanism The condition may be exactly reproduced in animals by bandaging

To this picture, which is reproduced at the expense of repetition for purposes of comparison, may be contrasted that which has been known to follow the application of Esmarch's bandage Here the muscles are flaccid, there is no trace of contracture and no inflammatory reaction sets in after removal of the dressings Soon after the appearance of paralysis the electrical reactions of the muscles are found to be normal (this is important), but the electric excitability of the nerve trunks is depressed and sensibility is lowered Plainly, then, Esmarch's bandage has caused some interference with innervation Is this purely mechanical or is it due to anemia of the nerve trunks?

We know that the nerves may be rendered ischemic by constriction To decide the matter, von Frey experimented with animals and succeeded in producing ischemia of the sciatic, having isolated it below the foramen and then constricted it at the latter Later he faradized the nerve and caused all the muscles to contract Ischemia, then, is not the cause of the nerve disturbance, which must be due purely to mechanical injury to the nerve trunks as a result of the application of the elastic bandage von Frey's observations and experiments were corroborated by Kobner,[29] Bernhardt[30] and H Braun no less than 11 clinical cases being on record up to 1894

Writing of ischemia of the muscles produced by cold and giving the clinical picture seen in the ordinary Volkmann type due to tight splints, Lorenz states that cases with histologic findings have been placed on record by Kraske and the younger Volkmann The muscles

28 Von Frey Wien klin Wochft 1894 vol vii p 23
29 Köbner Deutsch. med Wochft 1888 p 186
30 Bernhardt Arch f. Psychiatrie, 1888 vol xix p 514

and vascular walls suffer chiefly in this type, although gangrene of the skin may co-exist

Lorenz states that the embolic type of muscular ischemic paralysis may be due either to embolism or thrombosis of the arteries when the occlusion is sufficient to prevent collateral circulation Emboli are secondary to heart disease, thrombosis to diseases of the vessels themselves (syphilitic endarteritis endarteritis obliterans), or as a sequela of acute infectious diseases, marasmus etc, arteriosclerosis being a factor Still other cases appear to be due primarily to nerve lesions which affect the vessels secondarily (Raynaud's disease, Morvan's disease) Finally, *there is a traumatic type* due to injury to arterial trunks However produced, ischemic muscular paralysis and contracture is one and the same condition The symptoms caused by sudden plugging of a large arterial trunk by an embolus agree closely with those produced by the application of overtight splints It is said of the type produced by cold that it has a better prognosis than have the other forms

In regard to the medicolegal aspects of Volkmann's contracture, Kriege[31] writes as follows "The contracture occurred, as a rule, in children who had sustained uncomplicated fractures of the upper extremity Plaster of Paris was used more frequently than splints In nearly every instance there were 'warning signs' that the dressings were too tight The diagnosis presents hardly any difficulty, Volkmann having laid down the rules As to prognosis, the severe type of contracture and the prolonged paralyses are practically incurable, but all cases demand patient and careful treatment

"The medicolegal witness has to determine the following (a) Whether an ischemic paralysis or contracture is present This should not be difficult on careful notation of the electrical behavior of the muscles (b) Whether the tightness of the dressings was at fault or whether there was originally a lesion of the artery, this is decided by the presence or absence of the pulse beat below the fracture (c) What are the disadvantages to the patient arising from the contracture? and (d) Whether the surgeon did or did not give to the case the care that his calling requires"

SURGERY OF THE SPINAL CORD *

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Surgical intervention in spinal cord affections has been at all times a matter of hesitation on the part of surgeons Results were so varied and indefinite that for a long time no conclusions could be drawn as to the necessity and probable outcome of operative treatment Statistics were meager and their reliability doubted where favorable results were recorded In this paper I shall deal mainly with the different types of injuries to the spine and spinal cord and endeavor to bring out the important points in diagnosis and definite indications for surgical treatment in cases amenable to it I also hope to be able to show that in certain cases patients should not be operated on as the cases are absolutely hopeless from our histologic knowledge of spinal cord degeneration and regeneration Of course, it goes without saying that the basis of all this work is a very thorough and comprehensive knowledge of the anatomy, histology embryology and physiology of the central and peripheral nervous system [1]

The subjects to be discussed are

- *a* Contusion
- *b* Concussion
- *c* Punctured wounds of the cord
- *d* Hemorrhage or clot in spinal canal and cord
- *e* Dislocations and fractures
  - 1 Contusion of the cord
  - 2 Compression without division
  - 3 Partial division of the cord
  - 4 Total division of the cord
- *f* Gunshot wounds
- *g* Tuberculosis of the spine and spinal cord
- *h* Tumors
- *i* Spina bifida

CONTUSIONS

Contusions of the spine may be of various degrees They may affect the superficial tissues, as the muscles and ligaments, cause an effusion of blood into the spinal canal or cord, or cause traumatic zonal inflammation with paralysis without division of the axons The symptoms following a contusion to the spine may be widely at variance with the apparent degree of trauma and a classic clinical picture can not be drawn In many of the cases of contusion to the spine even in those of severe character, we may be surprised to find no symptoms of cord injury at the beginning I have had several cases under my personal observation in which no initial symptoms were present, but in which, in a short time, varying from a few days to several weeks, a traumatic reaction set in and the patient developed complete paraplegia of both motion and sensation The following case will illustrate this statement

G M, aged 23, while carrying a carboy of acid across a bridge, fell a distance of 12 feet and struck on his buttocks He felt some pain after the fall, but was able to resume his work in a few hours For three days following the injury he was able to walk and work On the fourth day he felt a pain in his back and was obliged to discontinue work From that time on weakness and incoördination of the limbs gradually developed, although he was able to walk with the assistance of crutches for about three weeks At this time, on examination I found that the spine was sensitive to pressure at the eleventh lumbar junction, but no fracture could be detected There was no numbness of the limbs but incoördination of motion Within two weeks his paralysis was complete below the level of the dorsal lumbar junction This continued for three months At the end of this time sensation began to return There was partial restoration of motion at the end of four months In June (four months later) the patient was *again able to walk with the assistance of crutches, and finally*, at the end of 14 months, motion and sensation were completely restored

This case illustrates two points First, the absence of initial evidence of injury to the cord and development of paralysis five weeks later second, complete restoration of function without surgical intervention after 14 months

In such cases while there is no gross anatomic change in the spinal cord and its membranes we are convinced that some changes must have taken place later in its vessels and neuroglia which interrupted the transmission of impulses Cases of this type have been interpreted clinically as destruction of spinal cord with regeneration They do not deserve such interpretation The are simply cases of zonal paralyse which are produced

31 Kriege Vierteljahr f gerichtl Med. 1903 vol xxv Supplement, p 55

* Abstract of a paper on Surgery of the Spinal Cord and Peripheral Nervous System read in the Section on Surgery and Anatomy of the American Medical Association at the Fifty-seventh Annual Session June 1906

1 This part of the paper had to be omitted the paper in full including the portion on the surgery of peripheral nerves will appear in Surgery Gynecology and Obstetrics April 1907

without division of the cord or axons and are completely restored after the inflammatory condition has subsided, and the products of the inflammation have been removed There is no regeneration of spinal axons The observation of Schmauss, namely, edema and swelling of the ganglionic cells and of axons in the traumatized cord of rabbits, does not necessarily mean degeneration We interpret that as an atrophy, as shown by the frequent recoveries in similar cases in man These have proven the truth of this assumption Several observers have noted cellular changes in the gray matter and neuroglia of the cord after applying great force to the spinal column, insufficient, however, to produce fracture or dislocation Following laminectomies we frequently have complete paraplegia with full restoration of function illustrating operative, zonal, inflammatory reaction

An insignificant trauma of the spine may cause marked paralysis

Aug 18, 1886, I had under my care a patient who, while sitting in a hammock, tipped backward, falling a distance of two feet to the ground Immediately after the accident he developed a paralysis of motion and a numbness of sensation in both the upper and lower extremities There was no special deformity or displacement, but great sensitiveness at the fifth cervical spinous process In November of the same year the patient was able to walk, though hesitatingly, and had still a numbness of sensation in the previously paralyzed members In May, 1887, he was still coming to my office At the same time he was practically well, except for some unsteadiness of gait and uncertainty of equilibrium when he turned suddenly The index and middle fingers of the right hand were the last to recover This is a good illustration of the traumatic transient type of zonal paralysis

CONCUSSIONS

By spinal concussion is meant an impairment or loss of function of the spinal cord due to injury which is not sufficient to produce gross anatomic changes The term "spinal concussion" is accepted by some surgeons and rejected by others While spinal concussion is a temporary reaction, it is not a definite morbid entity We do not accept as spinal concussion other cases than those with symptoms of pronounced zonal hyperesthesia or anesthesia and with a zone of diminished reflex, or paralysis partial or complete Those who deny spinal concussion base their views on anatomic grounds, namely, the small size of the cord, as compared with the spinal canal, and its suspension in the canal by the denticulate ligaments and nerve roots which protect it from injury in traumas short of fracture or dislocation

In this connection we must mention that hemorrhage in the spinal canal may produce an exact clinical picture of spinal concussion Therefore, differential diagnosis between these two conditions is quite impossible There are several cases on record, however, where the disappearance of paralytic symptoms in a short time point to the probability of spinal concussion On the other hand, many postmortem examinations have not shown any anatomic changes in cases where marked paralysis following injury were noticed and continued up to the time of death In Guy's Hospital Reports is recorded the case of a woman, 59 years of age, who fell on her back and immediately developed marked paralysis of the upper and lower extremities On the tenth day she died of pneumonia A careful postmortem examination was made and no anatomic changes were found either in the brain or cord There was no evidence of effusion of blood in the spinal cord or canal

In my experience I have had several cases of injury to the spine in which physical examination did not reveal evidence of dislocation or fractures, although the patients developed marked paralytic symptoms In most of these cases perfect recovery took place in from six to twenty months

PUNCTURED WOUNDS OF THE CORD

The knife is usually responsible for such wounds The cord may be injured without fracture of the vertebra Wagner-Stolper has collected 86 cases of punctured wounds of the cord Of these, more than half occurred in the cervical portion of the cord and the remainder in the upper region of the dorsal part There was no case of puncture of the lumbar cord The reason for the cord being punctured more often in the upper than in the lower part is very simple. The object attacked by an assailant is generally the head, and anatomically there is a considerable interspace between the vertebræ in this region for the admission of the knife blade As a rule, such wounds involve one-half the cord, though sometimes the knife may pass beyond the median line and injure the other side

The clinical picture of punctured wounds of the cord is that of a hemisection lesion. Out of Wagner-Stolper's 86 cases, 44 presented the picture of hemisection The symptoms appeared immediately after the injury, and the course was generally an aseptic one Twenty per cent. of the patients died The remainder improved, but few recovered

So far as treatment is concerned, very little can be done beyond rendering the external wound aseptic, and keeping it so Operation is never indicated, except where infection of the spinal canal has occurred, or when there is compression from hemorrhage If this occurs early it can be relieved by a lumbar puncture done with a large needle. The divided axons of the cord do not regenerate as they have no neurilemma, and suture of the severed segments is not only useless, but adds to the danger present Such paralysis as results from effusion or traumatic zonal inflammation will subside without operation Therefore, these cases all contraindicate laminectomy

HEMORRHAGE IN THE DURA AND SPINAL CORD

The blood may occupy the spinal canal, extra dural, may be beneath the meninges, or may be in the substance of the cord itself In the second case it is called hematorrachis, in the third, hematomyelia. The most important etiologic factor of hematorrachis and hematomyelia is trauma from a blow, fall, gunshot or stab wound of the spinal canal

The symptomatology of hematorrachis is not definite Patients usually complain of pain in the spine, paroxysmal and burning in character, pain along the nerves, and occasionally muscular spasms, opisthotonos, convulsions and finally paraplegia While the paraplegia is sudden and complete in fractures and lesser injuries to the spine, in hematorrachis it is gradual and progressive, often developing two to four days after the injury The symptoms of hematorrachis usually develop in the first 24 hours, increase in severity up to the fourth day, and disappear in from four to six weeks There are, however cases in which the paraplegia is sudden and complete, depending on the size of the vessel, as in a case of mine of a bullet wound of the cervical region, and one of Edward Janeway

The best test for hemorrhage (in fractures, bullet wounds, etc.) is lumbar spinal puncture Twenty to 30 c c of fluid may be drawn off If the cord is injured above the puncture then the spinal fluid may be bloody

The hemorrhage may be extra- or intradural, or combined When the dura is lacerated, hemorrhage is usually due to rupture of the venous plexus, and rarely to rupture of the arteries The blood has a tendency to extend downward and, therefore, the hemorrhage is more extensive if the lesion is situated high up As the lumen of the spinal canal is large, the quantity of blood is considerable Diagnosis of intradural hemorrhage can readily be made by lumbar puncture, and the pressure of the cord relieved by this procedure, if the puncture is made early

While hemorrhage is generally due to injury, occasionally it may be non-traumatic in origin Edward Janeway reports a case of spontaneous subarachnoid hemorrhage in a bleeder The young man, after having recovered from a slight attack of influenza, suddenly lost sensation and motion in the lower extremities and fell to the floor The autopsy revealed extensive hemorrhage in the subarachnoid space up to the middle cervical region There was also some blood between the dura and the arachnoid The patient's brother was also a bleeder

Hemorrhage into the spinal canal may produce marked paralytic symptoms, even to complete paraplegia In such cases diagnosis can not easily be established, as illustrated by the following case from my practice in Cook County Hospital in 1887

A man was shot in the neck. The bullet passed external to the jugular vein just above the clavicle. He said he did not fall immediately after this wound A second bullet passed through the shoulder and hand, when he fell to the floor He was taken to the hospital shortly after the accident There was complete paralysis of the upper and lower extremities and he was able to move the muscles of the neck only The diaphragm acted on both sides It was concluded that the patient's statement was wrong, and that in all probability the first bullet entered the shoulder and hand, while the second one struck and divided the cervical region of the cord He died on the third day

The autopsy showed that the cord was not injured by the bullet The meninges were divided and the intravertebral artery was severed, which permitted an extensive hemorrhage within the dura, this was filled with blood from the occiput to the cauda In all probability the man's life could have been saved if the tension had been relieved by immediate tapping of the spinal canal in the lumbar region From the postmortem findings it was evident that the first bullet entered the neck, as was stated by the patient, and the second the shoulder and hand, and that his fall was due to the blood pressure on the spinal cord from the hemorrhage in the canal

Hematomyelia—Hemorrhage into the substance of the cord usually occurs in the region of the fourth, fifth and sixth cervical vertebræ According to Thorburn, the hemorrhage in that region is due to over-flexion of the spine If the hemorrhage in that region is confined to the gray substance only, there is wasting of muscle and anesthesia of the upper limbs, also zonal absence of reflex If the hemorrhage involves the white substance there is paraplegia below the level of the lesion

Prognosis must be guarded in cases of hematomyelia Even in cases of recovery there is always a weakness left, due to the destruction of the ganglion cells of the motor neuron at the point of hemorrhage Hematomyelia may be due to gliosis spinalis A patient of von Bergmann, a girl 19 years of age, died from this condition, as shown by the postmortem examination

DISLOCATIONS AND FRACTURES

Dislocations—A dislocation without fracture practically never occurs Rarely do we find luxation alone of the upper segment, but as a rule, dislocation is associated with fractures, and the symptoms are those of compression Recovery is possible, if the cord is not divided, and the compression is relieved early The subject will, therefore, be treated under the head of fractures, and included with them will be associated luxations

Fractures—Fractures may be due to direct or indirect causes, as, for instance, forced flexion The direct force may fracture a vertebra but, as a rule, the fragments are not displaced The laminæ and spinous processes may be driven into the spinal canal and cut off and thus compress the cord This, however, is a rare type of accident and one diagnosed readily The bony fragments do not compress or lacerate the cord, at least not primarily The following history is a striking illustration of an exception to this rule

Patient—T Y, aged 38, Italian laborer, was admitted to the Presbyterian Hospital, May 3, 1906

History—While attempting to get off a moving train April 27 he fell or was thrown, and was unconscious for 15 minutes On regaining consciousness he was unable to move the lower extremities and complained of severe pain in the back He had retention of urine since that time, and it had been necessary to catheterize him The patient did not know in what position he fell at the time of the accident

Examination—He was of fair muscular development Head neck and chest negative, except congestion of the lower lobes of the lungs Abdomen was negative, marked hematoma over the lower lumbar region The vertebral column showed a most pronounced angle at the level of the third lumbar vertebra the lower fragment was displaced forward about an inch and a half, a superficial abrasion being present at this point The displacement could not be reduced by manipulation or extension The left foot showed a hematoma on the internal aspect of the heel There was a complete paralysis of sensation and motion below the second lumbar zone Reflexes Abdominal present, cremasteric, abolished, patellar and Babinski, absent

Diagnosis—Fracture of spine, with anterior displacement of the lower segment and division of the caudal fasciculi

Operation—May 3, 1906 The fractured zone was exposed by single incision It was found that the arch of the second lumbar vertebra was driven in and had compressed the cauda The third and remaining vertebræ below were displaced forward, the arches of the third and fourth and the body of the third were fractured and the spinous processes driven down in the cord Almost all of the caudal filaments were divided by the great forward displacement of the lower segment The second, third and fourth spinous processes and laminæ were entirely removed the dura was opened for a considerable distance by a longitudinal incision, the fasciculi were picked up and the divided filaments united by an end to end suture The right and left halves of the proximal ends were easily determined by their position The distal ends were considerably entangled, but the right and left could be differentiated by applying the faradic exciter to the filaments This caused a muscular contraction in its respective muscles notwithstanding that four days had elapsed since the division, when applied proximately to the contusion there was no muscular response This muscular response after division corresponded to that obtained in our examinations of divided peripheral nerves the same length of time after their separation After completing the approximations, the dura was sutured in position, and a muscle flap drawn from each side filling the gap to the skin level The patient stood the operation fairly well although his breathing was noticeably more rapid than at the beginning From these physical findings we concluded that the man was struck in the back with great force which first fractured the spinous processes and laminæ of three of the vertebræ, and then carried the lower segment forward for a full inch He died on the morning of May 7 apparently from a double pneumonia There was no autopsy

Indirect force may produce fracture and displace the fragments of the vertebra so as either to concus- com-

press or divide the cord, as falls on the buttocks and shoulders, or extreme flexions or extensions of the body In these cases the site of fracture is usually at the dorsolumbar junction Where the paralysis is immediate, uniformly transverse and complete, both of motion and sensation, there is no hope of recovery either with or without operation, as the spinal cord is divided Surgical intervention is of value only in cases where the fragments press on the cord without having caused complete division None of my patients in which the cord was divided by a fragment, recovered The degree of pressure on the spinal cord can not easily be determined, and it is difficult to tell at the beginning how much pressure is being exerted on the intact cord One can fairly accurately estimate when the cord is completely divided, as there is then a complete immediate annular paralysis of both motion and sensations, thermal, tactile and deep and superficial pain below the line of fracture, and a primary absence of tendon reflex These cases are beyond repair

Fracture with contusion of the cord may cause a motor or sensory paralysis below the line of union The paralysis is rarely immediate, and is never complete and annular of both motion and sensation The irregularities indicate that some columns of the cord are still intact, usually the paralysis comes on hours, days or weeks after the trauma It is preceded by a zone of pronounced hyperesthesia and is accompanied by abolished reflexes in this zone The motor or sensory manifestations will predominate, depending on whether the anterior or posterior columns of the cord have suffered most. Compression may be associated with contusion

There is no known means of making a differential diagnosis of continued compression in addition to contusion, the degree of displacement of the spinous processes being the only physical manifestation we have for suspecting compression in addition to contusion Both may give the same degree of primary paralysis Both may give the same speedy or slow increase in the paralysis, both may have a stationary degree of paralysis for a considerable period of time, both may have a late manifestation of paralysis, as shown in the cases cited under contusions Therefore, differential diagnosis is impossible without laminectomy, which, however, is a procedure to be avoided, as a contused cord suffers additional insult by any operation, no matter how delicately performed However, where compression is suspected on account of the great displacement, one must not hesitate, but operate immediately

Partial divisions of the cord give a symptom complex resembling contusion, in that there is an irregularity in the transverse line of paralysis, and either sensation or motion may be present to a limited degree Operation is contraindicated except where continuous compression is suspected

Dr Walton says "We have no symptoms from which we can assert from the outset that the cord is crushed beyond at least a certain degree of repair It has been said that where there is complete loss of sensation, of motion and of patellar reflexes, the cord is completely crushed, and consequently recovery can not be expected" It is stated in the same article that the patellar reflexes may be present in a case of complete transverse destruction of a segment of the cord This is possible secondarily as the ganglionic cells of the motor neuron below the point of division may be in perfect condition, though the contact axons of the central neurons are divided

In fractures, with division of the true cord, operation with suture of the cord is absolutely worthless, functional regeneration of the columns of gray matter never takes place The improvements recorded by many authors were in cases in which only contusion or hemorrhagic compression of the cord existed, or where the type of traumatic zonal paralysis was present, which would have improved as well, if not better, without operation Laminectomy in the dorsal and cervical region is, therefore, never indicated for division of the cord

When the fracture occurs in or below the twelfth dorsal vertebra the treatment and prognosis are entirely altered The cauda equina, which begins here, is made up of essentially peripheral nerve fasciculi, and not of spinal cord fasciculi, as the axons of the motor root in this portion have their ganglion trophic cell bodies above this level in the conus, and the motor axons in the cauda are covered with the sheath of Schwann, or neurilemma They therefore degenerate after division and have the power of regenerating, the same as peripheral, motor axons The sensory neurons of the posterior roots of the cauda have their ganglion cells just inside the sacral and lumbar foramina Their proximal axons, which run through the cauda to the spinal cord, are medullated and have a sheath of Schwann They are capable of regeneration, at least up to the posterior commissures, and from clinical observation, we believe they can again come in functional contact with the posterior horn of gray matter In other words, both the motor and sensory neurons in the cauda outside of the cord are histologically capable of regeneration under favorable conditions, that is, after accurate suture, and exact approximation of the ends of the divided caudal fasciculi under aseptic conditions It therefore becomes imperative for us to establish this approximation in every case of fracture of the lumbar spine with division of the caudal fasciculi and paraplegia

It is easy to determine up to the seventh day after the injury, by a mild faradic current, which are the right and left fasciculi If the faradic current is applied to the individual nerve bundle distal to the trauma, there is a muscular response in the zone supplied by that bundle as shown in case of T Y If applied proximal to line of division, or even in severe contusion, there is no electric response This corresponds exactly with the electric response after division of peripheral spinal nerves, external to the bony canal Laminectomy with suture in this position is not extremely difficult It has in it, however, the danger of sepsis, as the spinal canal and dura are open

In every case of fracture, stab or bullet wound, where supposedly, the cauda has been divided, exposure and suture of the fasciculi are positively indicated, the individual points of suture to be surrounded by egg membrane to lessen connective tissue interpositions (The transplantations of caudal fibers in the treatment of unilateral paralysis of the entire lower extremity will be described in the article on peripheral surgery under its subdivision nerve anastomosis in anterior poliomyelitis)

GUNSHOT WOUNDS

Theodore Previtt collected 49 cases of gunshot injuries treated since the antiseptic era Of those operated on, 11 recovered and 13 died, of those not operated on, 8 recovered and 17 died Mortality Cervical region, 55 per cent, dorsal region, 66 per cent, lumbar region, none Three cases of the latter had operations and all recovered Previtt concludes as follows a Immediate

operation if the wound is in an accessible region, and if it involves posterior or lateral portions of the spine b It is imprudent sometimes to wait for repair to be effected by Nature

In bullet wounds of the spine, involving the spinal cord itself, operation is contraindicated, as from our knowledge of the absence of regeneration of the spinal cord proper, operation would be useless If the cord is not severed, such fibers as are not divided will recover from the zonal paralysis resulting from the contusion and concussion without operation, while the fibers which are divided can not derive any benefit from surgical procedure If the bullet remains within the spinal cord and compresses the cord, as the skiagrams will readily show, it should be removed If the cord is compressed by fragments of bone, which may also be determined by the Roentgen ray, operation is indicated If the cord is compressed by accumulated blood within the meninges a lumbar puncture for its relief is indicated The blood is kept fluid by its intermixture with the cerebrospinal fluid

Mortality—The causes of mortality from fractures of the cervical region are due to interference with the essential function of the centers of the spinal cord Death may occur on the third or fourth day as the result of the degree of fracture In fractures in the neighborhood of the fourth and fifth cervical, the temperature reaches as high as 106, 107 or 108 F, and even higher, as in one of my cases as high as 111 F This is a central temperature from the destruction of the automatic center of temperature control Respiration may be compromised from the injury of the phrenic segment of the cord, which corresponds to the fourth and fifth cervical

With fracture in the upper dorsal region, the functions of the abdominal organs are greatly disturbed, and there is paralysis of peristalsis, enormous tympany may result, respiration may be impaired by the intra-abdominal pressure on the diaphragm In fractures of the spine above the second lumbar, sphincteric control is destroyed

Of the secondary causes of death the most prominent are vesical infection and ascending sepsis to the kidney Next in frequency is the decubitus infection The former can be avoided in a large per cent of the cases by permitting the bladder to overflow from the beginning and refraining absolutely from using the catheter If the catheter has once been used and decomposition takes place, then it must be continued Relaxation of the vesical sphincter is favored by transprocteal massage The decubitus can be avoided or retarded by the water bed air cushion, frequent changes of position and by dermal cleanliness

John Chadwick Oliver reports 57 cases of fracture and dislocations of the vertebræ Fifty of these developed nerve symptoms after the injury, seven showed no evidence of spinal involvement

Thorburn collected 56 cases in which the patients were operated on with 38 deaths, 67 8 per cent, 18 recovered from the injury, 2 recovered from cord symptoms, and 16 showed little or slight improvement Dr Samuel Lloyd collected statistics on 185 operations, with only 24 recoveries and 40 improvements There were only 12 improvements by immediate operation, that is there were only 12 that improved from the symptoms at time of operation From various statistics of cases in which the patients were not operated on and from my experience, the immediate mortality is no small percentage The number of recoveries in 82 immediate operations was five The recoveries without operative interference far exceed this number The number of recoveries with late operation is a little more gratifying, there were 19 recoveries in 113 operations, which, when compared to the number of late recoveries without operation, may be considered as giving us some justification for the late operation Lloyd's results are about 50 per cent. better than Chipault's Chipault, in 1894, published 167 cases in which operation was done for fractures of the spine, 12 recovered and 24 improved

INDICATIONS FOR, AND TIME OF, OPERATION

In the cases that have come under my observation, it has been difficult, and many times impossible to ascertain whether I was in the presence of a case of division of the cord, or reaction of the cord due to trauma Therefore, I always hesitate about operating until I am satisfied that the cord is not completely divided The immediate complete bilateral circular paralysis of both motion and sensation is the only positive evidence of division of the cord Where there is definite evidence of fracture or dislocation with division of the cord by fragments, operation is contraindicated and should not be performed Where there is evidence of compression by blood or small bone fragments with fracture or dislocations, as shown by the fact that the paralysis is not immediate, not circular and not complete of both motion and sensation, an immediate operation may be indicated Where the symptoms are persistent, the operation should be performed

John Chadwick Oliver divides the surgeons into three groups First, those who advocate operation in every case of injury to the spine in which cord symptoms are present. Second, those who abstain completely from operation Third, those who advise operation in selected cases I belong to the last class of surgeons Eugene Hahn[2] advises operation as early as possible, and particularly in cases of compression due to fractures of the arch, which always result from direct violence However, he says the question of early operation is not settled as yet

Andrew McCosh condemns the waiting and watching policy He advises early operation unless severe shock is present Kocher is of the opinion that operation can be delayed and advantageously performed after long-continued pressure has been present There are several cases on record where patients were apparently benefited by late operation This is in consonance with a and gradual paralysis from neoplasms within the but one can not see how that type of pressu be exerted by a displaced fragment, but it mi the callus of bone repair

Carl Lauenstein records a case in which an result was obtained five weeks after injury rectal and urinary symptoms and trophic ch present in this case This is no proof at a was compression or that operation had an ever to do with the result, as the train and the result obtained, occur frequently f with fracture without compression McC case in which paralysis had been pre ent and yet complete recovery occurred after A Weeks reports a case by Huss in whic lowed surgical intervention one month a Allen Starr reports a case of compressio equina of one year's standing Operat by partial recovery Some anesthesia p

2. Deutsche Ztschr f. Chir., 1902 lxiii p 99

Samuel Lloyd says "In my opinion we should wait until the period of shock is passed and until there is evidence that there will be no spontaneous recovery" If, after this period, the patient still continues to improve, no operation should be considered, but as soon as the symptoms begin to show retrograde phenomena, or seem to have reached the end of improvement, operation should be undertaken This rule is not applicable with any degree of force or regularity as far as our observations tend Recoveries after operation performed within a period of two and one-half years after the accident can not be attributed to the beneficial effects of the operation, except in the cases where fragments or foreign bodies were compressing the cord.

TUBERCULOUS OSTEITIS OF THE VERTEBRÆ, VERTEBRAL CARIES, TUBERCULOUS GRANULOMATA.

Under this head we do not intend to describe in detail vertebral caries We will consider only that phase of the pathologic process which directly or indirectly may produce pressure symptoms on the cord In other words, we will deal principally with the tuberculoma, which should be regarded as an extradural tumor

It is practically an extradural tumor situated on the posterior portion of the vertebral body and in front of the cord, if it is of considerable size it may spread to the sides of the cord. It is never, however, posterior to it. From this we can understand that the primary symptoms will be principally motor as the pressure concerns the anterior or the anterolateral column Sensory disturbances may take place, not by compression of the posterior columns, but by pressure against the posterior roots at their exit and also on Gower's column From the symptoms one can accurately estimate the location of the tuberculoma, that is, which cord segment, and which column is compressed One can not, however, judge from the symptoms whether the cord is merely compressed without having undergone degeneration, or whether there is degeneration of the cord substance In localizing the tuberculous tumor it should be borne in mind that one is likely to make the error of estimating it too low

The topography of cord segments in their relation to the vertebral bodies must be clearly pictured in the mind of the diagnostician The splendid work of Victor Horsley, who has done so much to elucidate this condition, should be carefully studied by every one contemplating work in this line.

Prognosis—The prognosis in the paraplegia of spinal caries is always grave. Statistics from Billroth's clinic, quoted by Oppenheim, show that out of 97 patients, 48 died, 28 were cured and 11 remained unchanged Gowers states that the paralysis due to vertebral caries is the most favorable of all types of paralyses Generally speaking, the prognosis does not depend so much on the age of the individual nor on the intensity and extent of the symptoms, as on the amount of damage done to the cord substance which does not allow of repair, if the pressure has been long continued Operative procedure must, therefore, be timely

Operation—The operation for tuberculoma is a simple laminectomy (see laminectomy) Displace the cord to one side, expose the granuloma, remove it with a bone curette, fill the cavity with a Moorhof plug, replace the laminæ and close without drainage. It is usually not necessary to open the meninges One should not hesitate to curette extensively the vertebral bodies If the wound heals without suppuration and the cord has not long been compressed, the paraplegia rapidly disappears If a mixed infection follows, the cord may be destroyed and a permanent paraplegia result, as occurred in one of my early cases

Technic of Laminectomy—Before proceeding with a primary incision, it should be definitely determined by the operator whether his plan is to extirpate the spinous processes and laminæ entirely, or to preserve them If the former is decided on, longitudinal incision should be made parallel to the spinous processes on the operator's side of the middle line The incision should extend down the sides of the processes close to the bone After thoroughly exposing the muscle, a blunt dissection may be made on the lateral surface of the processes to the laminæ The attachment of the flap to the tip of the processes is then divided, and a similar blunt dissection made on the opposite side of the processes down to the laminæ, as shown in cuts by Bickham,[3] indicating also the points of division of the lamina

The hemorrhage, which has been considerable, can now be checked by gauze packing The inter-laminar spaces of one, two or three vertebræ should be exposed, and the conical drill rongeur, which I have adapted for this purpose, should be used to puncture the laminæ at the base of each transverse process The tips of my rectangular guarded bone-cutting forceps can be inserted in each of these punctures and the laminæ divided The interspinous ligament is next divided The spinous processes and laminæ can be lifted up readily with a sequestrum forceps This plan avoids all malleting and concussion of the cord, and guards against its possible puncture, it hastens the procedure very materially

The dura may now be opened, if desired, and the cord inspected, or if searching for a tuberculoma, the cord can be pushed to one side and the tumor recognized on one or the other side, anterior to the cord in the body of the vertebra, where it always forms The dura should be sutured carefully with catgut after the operation. If it is the purpose of the surgeon to conserve the processes and laminæ, then the H-shaped incision is preferable leaving a septum of tissue, muscle and skin one inch in diameter between the two parallel incisions, making the muscular blunt dissection one-half inch from the bone to the side The laminæ should be punctured in the same way and divided with rectangular bone forceps, and then the interspinous ligament is divided and the flap turned half up and half down

In replacing this, care should be exercised that the bone flap does not compress the cord The flap should be closed by deep catgut sutures and superficial sutures of silkworm gut. Horsehair should not be relied on, as its tension is so great in these cases that this suture may give way I had a case of compression by bone flap after operation, resulting in permanent paralysis Since that time I have removed laminæ and spinous processes completely, and have found no permanent weakness of the spinal column following the procedure In fracture and dislocation it is always desirable to remove the laminæ, as the luxation frequently can not be reduced at the operation, and there is danger of compression of the cord after the parts are replaced

In pronounced deformities following fractures, one should not hesitate to remove the protruding edge of the fractured body of vertebra This may necessitate a division of one of the spinal nerve roots Traction should be made on the nerve to draw it well into the canal, it may then be divided and sutured at the close

3 Am. Surg 1905

of the procedure The greatest care must be exercised in the manipulation of the cord, as it requires but a slight degree of trauma to produce a zonal paralysis In most of my cases a complete temporary paralysis immediately followed the operation

It is, however, only a zonal or traumatic paralysis, and entirely disappears as long as the centripetal and centrifugal axons are not divided and the ganglionic cells not severely traumatized, complete restoration always follows One of the unpleasant features of this work is the length of time necessary to obtain results, six months to two years being required for a restoration of function However, the time is not too long nor the labor expended too great, as otherwise the patient has before him no hope, except a permanent paraplegia In handling these patients after operation, care should be exercised that too great pressure should not be exerted on the vertebral bodies while moving the patients from one cart to another and to their beds

It is unnecessary to say that all these cases should be drained temporarily and that all aseptic precautions should be taken, as infections are more likely to occur here than in the peritoneum If the meninges become infected, the case is likely to terminate fatally Every precaution against bed sores (decubitus) must be taken. The bladder should not be catheterized, the patient should have a vaginal or procteal massage until overflowing is produced The urine once started will continue to flow If the catheter is once used it will have to be used continually, and decomposition of urine will occur This will necessitate frequent vesical irrigation, greatly increase the labor in caring for the patient, and very materially hazard his life, as vesical and ascending renal infection is the most common cause of death after operation for injuries to the spinal cord

SPINA BIFIDA

Spina bifida is a congenital malformation of the spinal column, meninges, cord proper or ependyma, consisting of a protrusion either of the meninges or of meninges and spinal cord through a cleft, resulting from failure of coalescence of the borders of neural groove, or absence of the vertebral arches

The nerve elements of the spinal cord are of ectodermic origin exclusively The cord is an invagination of the ectoderm forming a groove which is widely open at first, gradually closing to form a tube—the neural tube The mesoderm supplies the serous, bony and muscular elements which arrange themselves around the neural tube A malunion or absence of the involuting neurilemmic elements which form the vertebral arches and spinous processes will leave a cleft through which the meninges alone or with the spinal cord, will protrude posteriorly, because of lack of support

The defective coalescence of the spinal processes may be either partial or complete In the first instance the opening involves two or three vertebræ, either in the lumbar or cervical region, as these are the last to close, the latter is the more frequent Complete absence of union is called *rachischisis totalis,* and is an uninterrupted opening extending from the cervical to the sacral region This variety of spina bifida, however is extremely rare

In the circumscribed type of the spina bifida we find a protruding tumor the size of which may vary from 3 to 15 centimeters in diameter having either a broad or pedunculated base The sac usually protrudes posteriorly Occasionally the sac bulges anteriorly, it escapes through the defective body or process or through the spinal foramina, as shown in the following cases, and is discovered by accident Several cases of this type are recorded in the literature, De Forest Willard reports the case of a child 2 months old with a large cyst palpable through the right iliac fossa The cystic tumor which communicated directly with the spinal canal bulged anteriorly when coughing Its walls were the meninges and the contents cerebrospinal fluid Emmet reported a case in a woman 36 years of age with a very large cyst extending down to the pelvis It was aspirated through the rectum and three quarts of fluid removed

The patient died on the seventh day of septic meningitis Postmortem examination revealed a cyst formed of meningeal membranes, which protruded into the pelvis through the sacral foramina Robinson operated in the case of a child 11 months old, who had a large cystic tumor occupying the entire right side of the abdomen The patient had club feet, there was no tumor to be found posterior to the sacrum A diagnosis of parovarian or broad ligament cyst of fetal origin was made During the operation the surgeon found that the cyst communicated directly with the spinal canal, and that it was anterior spina bifida Patient died after ten days Postmortem showed extensive defects on the right side of the last dorsal and first lumbar vertebræ The pedicles of the transverse process of the last vertebra were absent. The first two lumbar vertebræ had an undeveloped point of ossification on the right half, while the third lumbar vertebra had no point of ossification at all The spinal column was curved laterally, the concavity being directed toward the left There was a marked dilatation of the ependymal canal Bryant reports a case of anterior spina bifida in a woman of 25 who died from trauma The tumor was discovered accidentally

Varieties of Spina Bifida—Dana distinguishes three varieties (*a*) Meningocele, a protruding sac composed of meningeal membranes and cerebrospinal fluid only This may be either (1) anterior, abdominal or pelvic, (2) posterior or dorsal (*b*) Meningomyelocele hydromyelia, a tumor composed of meningeal membranes, cerebrospinal fluid and spinal cord, including the cauda equina (*c*) Syringomyelocele, composed of meninges, cerebrospinal fluid and spinal cord with an enormous dilatation of the central canal or ependyma

To these we may add spina bifida occulta, which is a cleft of the spinal column without any visible protrusion of the contents of the spinal canal In great defects the cord is a velvet-like band containing blood vessels and flattened nerve elements spread out under the meningeal covering In circumscribed varieties the sac may be covered with skin and hair, or simply with a thin epithelial layer which, together with the pia form an epithelio-serous covering

In the first variety of Dana, the cord elements may be intact In the second, the cerebrospinal fluid lies in the subarachnoid sac The nerve elements of the cord protrude into the sac in two-thirds of the cases The fibers are attached on the posterior and median surface of the sac and form a part of the cyst wall

In the third variety there is a considerable dilatation of the ependymal canal with complete or almost complete pressure atrophy of the spinal cord at the point of dilatation with a paraplegia below that zone

Treatment—Treatment [illegible] injection or excision Injection [illegible] is still in

vogue Morton's fluid, which has the following composition, is the one generally used

℞ Iodin	gr x		6
Iodid of potassium	gr xxx	2	
Glycerin	ʒi	30	

Injection is not free from danger, and its efficacy is very questionable I have used it three times in one case without any effect, except a temporary disturbance of the central nervous system

Excision of the sac seems to be the radical and more desirable procedure The sac is best attacked from the side because the fibers of the cord are more frequently spread and attached to the median portion of the posterior wall, the line of embryonal cleavage When the sac is pedunculated, it should first be freed from its attachment to the spine and neighboring structures, except its highest point, which is adherent to the skin, and an elliptical subcutaneous flap should be permitted to remain attached to the sac When the latter is freed to a level with the cord, a provisional ligature should be thrown about its neck without tying The sac should be opened, carefully examined, and if the cord is not protruding, the ligatures should be firmly tied, an overstitch of catgut should give it additional support If the base is broad the same procedure should be followed, except that after opening the sac and inspecting it, the ligature should be removed It should then be amputated at its base and carefully sutured if it be a case of syringomyelia, and if the cord protrudes into the sac, the fibers of the cord should be freed from their attachment to the meninges and replaced in their normal position, the opening in the sac closed with a continuous chromoform catgut, or preferably, kangaroo tendon suture

If a complete syringomyelia exists, the cord should be amputated in both directions from the center of elevation to a normal anatomic zone, then a careful end-to-end suture of fibers should be made if the spina bifida be situated in the caudal zone If above the caudal zone, the cord should be freed and replaced within the dural sac without suture, the opening closed, with little hope of motor improvement offered the patient The muscles supplied by the distal fibers should be localized by the faradic current Our results, immediate and remote, have been most satisfactory after this technic

Mayo-Robson uses a median incision He also leaves a segment of the skin in place if separation of the cord from it is difficult He advises that the meninges and skin should not be united on the same longitudinal line In the clinic at Breslau the meninges are united longitudinally and the skin transversely After the removal of the sac, in order to prevent subsequent hernia of the contents of the spinal canal, the defect is repaired either by a muscular flap (Bayer), or by osteoplastic flaps (Selenko Boboroff) Mayo-Robson once transplanted periosteum and bones from animals for this purpose The spinous processes may be divided at their base, leaving the soft parts attached, drawn upward and sutured in the median line to form a bony arch over the posterior surface of the cord

Prognosis—The mortality in the treatment of spina bifida by injection of Morton's solution is 20 per cent Statistics of the Clinical Society in London, which include 71 cases treated by injection, show 49 per cent cured 5 per cent improved, 7 per cent unchanged, and 38 per cent mortality

The following case of spina bifida is the first and only one of this type treated in this manner

History—Baby R, family and general history negative. A mass the size of a silver quarter was noted at birth in the median line of the back at about the level of the dorsolumbar junction This at first was flattened and of a fluctuating consistency A serosanguinous fluid discharged from the most dependent portion of the tumor This continued during the first year, but finally yielded to local treatment The tumor mass gradually increased in size, but the growth during the six months before entering the hospital was very rapid At the time of entering the hospital the mass was of the size and shape of a small orange, rather tense and fluctuating in consistency There was no tenderness or any evidence of inflammation in the tumor mass or in the adjacent skin The child's head had been large from birth and tended to approach the ventricular hydrocephalic type From birth the child had presented a complete paraplegia with absolute motor paralysis, anesthesia and analgesia, also loss of sphincter control Teething and talking began at a normal age, that is, as compared with the other children in the family

Treatment—A diagnosis was made of syringomyelic spina bifida Three injections with Morton's fluid were made There was some reaction, but no appreciable benefit, and operation was decided on

Operation—Freeing of the sac showed that the dilatation was central That is, it was due to an accumulation of fluid within the lower caudal and terminal portion of the ependymal canal producing a pressure destruction of the caudal nerves just below the exit from the conus and not producing a destruction of the conus ganglion cells or axones Careful dissection was done, separating the dura and sac from other tissues down to the bone border The cord was found dilated from the center with complete pressure destruction for an inch or more The peripheral cicatricial mass was dissected out The ends of the cord, upper and lower, were united with catgut sutures and the divided lateral nerves (lumbar plexus) attached to line of spinal suture Placing one pole of a battery at the upper and one pole at the lower end of the cord gave a pronounced muscular response in both lower extremities The dura was closed with a single row of catgut sutures The opening in the bony spine was also closed The fractured spinous process was turned upward at its attachment to the transverse process toward the median line and united with heavy catgut sutures A drain was placed (⅛ in perforated rubber) beneath the line of suture The aponeuroses of the quadratus lumborum were drawn together over the seam so as to retain lumbar muscle in the center line The skin flaps were supported by four silkworm gut sutures through hair line plates The skin was united with horsehair and a silkworm gut drain was inserted Cerebrospinal fluid was discharged for two weeks Temperature went up to 102 F, but subsided The patient recovered The feet changed in their temperature and color, and 'life expression' was noticeable before the patient left the hospital Dec 20, 1905

Postoperative History—Jan 14, 1906, the patient was progressing satisfactorily, there was no motion in the extremities, the legs and feet had an expression of "life" about them

June 16 The patient was in splendid physical condition The tumor in the back had not reappeared and the spine was apparently normal The central hydrocephalus has materially increased and the child is showing marked optic atrophy and is almost blind.

Sept 26, 1906 The limbs had become more firm and had lost their puffy and glossy appearance The first faradic response was noted June 29 1906 The limbs had a "living" expression, which they did not have before, showing that trophic changes were taking place Trophic restoration is the first indication of nerve repair next comes faradic reaction and finally voluntary motion It is too soon to expect voluntary motion in this case

If the dilatation had been 2 inches higher up operation for reunion of the cord would have been worse than useless and the danger from operation greatly increased, for in that position a resection of the sac and restoration of conformation of spine is all that could have been undertaken or justified It must be borne in mind that the sacral and lumbar nerves pass upward a considerable distance in the spinal canal before they enter the cord or conus and have the neurilemma

CONCLUSIONS

The gray and white matter of the spinal cord down to the cauda is made up of

(*a*) Intrinsic ganglionic cells (gray matter)

(*b*) Centrifugal cerebral axons (white matter of motor columns)

(*c*) Centripetal sensory axons from the spinal ganglia in which is located the trophic cell of the body of these axons making up the posterior sensory column. The centripetal and centrifugal axons within the spinal cord are aneurilemmic.

(*d*) Intercommunicating or associating axons which connect the various segments of the intrinsic ganglionic cells of the cord, and form the anterior ground bundle of white fibers

(*e*) Direct cerebellar centripetal axons originate from ganglionic cells situated in the posterior internal region or posterior horn and close to the commissure, leading to the ganglionic cells situated in the vermis superior of the cerebellum and are aneurilemmic (tract of equilibrium)

(*f*) Gowers' or the lateral spinal tract, the axons of which originate in the posterior horn, close to the commissure

(*g*) Neuroglia.

(*h*) The bulb or medulla oblongata is a continuation of the same ganglionic zones of gray matter in the cord and has all of the centrifugal and centripetal axons of the spinal cord In addition, it has its own peculiar anatomic elements

Nerves arising from the medulla are surgically spinal nerves Therefore, all of the "cranial" nerves, except those of special sense, are from a surgical standpoint, essentially spinal nerves The extracordal motor and sensory axons are medullated and neurilemmic

(*f*) Nerves of special sense should be called cerebral nerves, as their trophic cell bodies are outside the cranium, and in the organs of special sense The centripetal axons of these nerves, with the exception of the olfactory, are all medullated and all aneurilemmic.

The extra spinal root, both centrifugal and centripetal sensory, are medullated and neurilemmic The peripheral nerves of the bulb and cord (cranial and spinal) are medullated and neurilemmic to their nerve endings The terminal dendrites are medullated and aneurilemmic They possess, however, a limited potentiality of outgrowth of the axons beyond their neurilemma The cauda, from a surgical standpoint, is an intradural collection of extramedullary spinal axons, and is made up of axons with a medullary sheath and neurilemma The sympathetic system is a chain of ganglia and nerve trunks Their axons are neurilemmic and non-medullated

When an axon is divided, the entire distal portion from the trophic ganglionic body degenerates, proximally, it degenerates for a short distance, and for a longer distance it atrophies A ganglion cell once destroyed, the degeneration of its axon, or axons and dendrites is complete, and the restoration and sensation in its peripheral zone can only be obtained by anastomosis of its axons to other axons originating from healthy ganglionic cells as in anterior poliomyelitis

Ganglionic cells and aneurilemmic axons once destroyed never regenerate All neurilemmic axons, centrifugal (motor), and centripetal (sensory), are capable or potent of both anatomic and physiologic regeneration under favorable conditions For the rôle played by the neurilemma in nerve regeneration the reader is referred to the article on regeneration of peripheral nerves[1] Therefore,

(*a*) Ganglionic cells in the gray matter of the cord never regenerate (*b*) Centrifugal motor axons within the cord never regenerate as they are aneurilemmic (*c*) Centripetal sensory axons within the cord never regenerate as they are aneurilemmic

It can, therefore, be seen that there is no regeneration of the white columns or gray matter of the cord after destruction or division, it has never been demonstrated experimentally nor authoritatively observed clinically All these principles apply equally to the bulb or medulla oblongata The spinal, cranial, sensory and sympathetic ganglions once destroyed never regenerate The caudal portion of the cord is made up of neurilemmic centrifugal axons from the spinal cord ganglion cells, in the conus, and of centripetal sensory axons from cells in the spinal ganglia, which are situated extra dural in the lumbar and sacral foramina, both are neurilemmic, from the place they leave or enter the conus They are, therefore, all capable of regeneration, the same is peripheral axons

The extracordal or extramedullary and extrabulbous spinal and cranial axons are neurilemmic and potent of regeneration Therefore, divided roots within the cranium and spinal canal regenerate Peripheral nerves cranial and cerebral, are composed of neurilemmic axons and capable of regeneration The nerves of special sense, the optic, olfactory, gustatory and auditory, are composed of aneurilemmic axons and are incapable of regeneration if once destroyed In this particular, they resemble the columns of the cord Their trophic cells are situated in the retina Schneiderian mucosa taste organs, cochlea and vestibule When these membranes and ganglion cells are destroyed the cells and axons are incapable of regeneration The sympathetic nerve trunks are non-medullated, but neurilemmic and capable of regeneration

Hemorrhage, concussion and contusion without laceration may offer the same immediate symptomatic picture as that of division, and a positive differential diagnosis may be practically impossible

There is no direct relationship betwen the severity of the trauma and the degree of lesion in the cord The element of time and the order of appearance of symptoms is of great importance, and may be the only guide in the differential diagnosis

Absence of paralytic symptoms immediately after spinal trauma does not justify the surgeon in assuring the patient that such symptoms will not appear They may set in within a few days or even some weeks after the injury

If paralysis is due to hematorrachis the condition can be relieved by early spinal puncture Intra or peri-arachnoidal hemorrhage from bullet or stab wound may produce complete paralysis resembling a division of the cord If the pressure be relieved the patient will survive and paralysis will be temporary

The majority of cases of transverse or incomplete traumatic irregular paralysis following fractures recovers without operative treatment which signifies an absence of spinal cord division Wherever there is immediate and complete circular paralysis, operation does not benefit the patient in the least as there has been a division of spinal axons which never regenerate

Surgical intervention in injuries to the cord should be resorted to only in cases where the spinal cord is not completely divided, except in the caudal zone Immediate intervention will be of benefit when the cord is compressed above the cauda, or compressed and divided in the cauda If operation is at all indicated there is no reason for delay as degeneration changes may take place in the cells and neurons of the cord which would be as irreparable as its division

In fractures of the spine without considerable dis-

placement, we are justified in assuming that the cord is not suffering continual compression, regardless of the degree of paralysis, and operation is contraindicated If this paralysis is due to laceration, it will not be improved by operation If it is due to contusion it will recover without operation

In gunshot and stab wounds with immediate paralysis, operation is contraindicated, as the cord is probably severed, and its re-approximation will avail nothing except in the caudal zone After division or crushing of the nerves of the caudal zone, there is a positive indication for an end-to-end suture, axonal contact of the various fibers, as determined by faradic stimulation, the same as in peripheral nerves

In spina bifida centralis paralytica, in the caudal zone, resection of the atrophied section of the spinal cord with end-to-end union is indicated Apendymal spina bifida should be treated by resection of compressed segments, and accurate suture approximation of the fasciculi of the cauda Upper ependymal and true cord central spina bifida may be treated by ependymal subarachnoidal drainage.

In all non-malignant tumors of the cord, laminectomy should be performed at the onset of paresis Delay to complete paralysis is unpardonable, not to use a more forcible expression Operation after complete paralysis from compression with degeneration is contraindicated

In tuberculoma compression the spinal cord operations should be done at the beginning of symptoms of paralysis Late operations, that is, after a pressure necrosis of the cord, are worthless The bone cavity should be filled with a Moorhof plug, as this lessens the liability of suppuration and hastens the process of repair

In conclusion, surgery of the spinal cord, like surgery of other parts of the body, must be timely, i e, operation must be done before the pathologic condition is advanced beyond the possibility of repair In our present positive, though limited knowledge, timely action means conservatism, while delay must be interpreted as timidity and inefficiency

I wish to express my appreciation of the services of Dr Victor F Schrager in the preparation of this article

[FOR THE DISCUSSION ON THE PAPERS OF DRS POWERS AND MURPHY, SEE PAGE 826]

A CASE OF COLON BACILLUS SEPTICEMIA *

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Nov 2, 1905, Dr G W Wende, Buffalo, referred to me a man with the following history, whom he had been treating for syphilis

Patient—L A. K., jeweler, single, aged 38, American, with a good family history

Personal History—The man had had measles several times, typhoid in 1892 and diphtheria in 1896 and 1897 In 1888 he had a chancre, and in 1903 syphilitic rhinitis of mild type. For this he has been under treatment While under my care, he was seen in consultation by Drs Conrad Diehl, Chas G Stockton, G W Wende and Nelson G Russell Three weeks before consulting me he had had a severe wetting and had taken cold. A week later began to have night sweats, which continued nearly every night. Sweats occurred early in the night. The night before I saw him, he had had two sweats—one early in the night, the other early in the morning He slept well except for the sweats He had no headaches Appetite was good, no indigestion, bowels were constipated, especially during the last few days There was no cough or expectoration He was not short of breath, had no palpitation of heart

Physical Examination—Patient appeared pale with slightly yellowish tint, face was a little puffy Tongue was clean The heart apex was in the nipple line, at fifth interspace, sounds were both weak There was no other abnormality Pulse was 88, of moderate volume and regular tension Temperature was 100 5 F His weight was 160 pounds, a little below the average

Lungs There was very poor expansion, but no abnormality otherwise to be demonstrated.

Abdomen Liver was enlarged and slightly tender Spleen was of normal size Abdomen was generally normal

Urine 500 c.c, strongly acid, specific gravity 1029 Urea 14 8 gm Albumin none, sugar none, indican excess, bile trace, diazo reaction, negative, no blood. Microscope showed only urates

Blood Hemoglobin, 75 per cent, red cells, 4,500,000, white cells 3,800 Widal reaction negative, no malarial organisms found

Diagnosis and Treatment—There was doubt in my mind as to whether the case was one of syphilitic fever, general tuberculosis or typhoid fever I inclined to the opinion that it was one of tuberculosis The man was put to bed, his emunctories opened by a dose of calomel, followed by salts, alkaline drinks, and an afternoon tepid sponge An antiseptic cleansing mouth wash was used frequently, and a bowel wash of boric acid and ichthyol in warm water was given every other day A diet was ordered of milk, broth, raw egg and beef juice. Medicine Guaiacol benzoate 1 gm (gr xv) every four hours

Course of Disease—The temperature chart is shown. Until the last week of his life, the man's pulse varied from 70 to 80, and respirations from 20 to 24. On November 8, the spleen was noted as enlarged and palpable

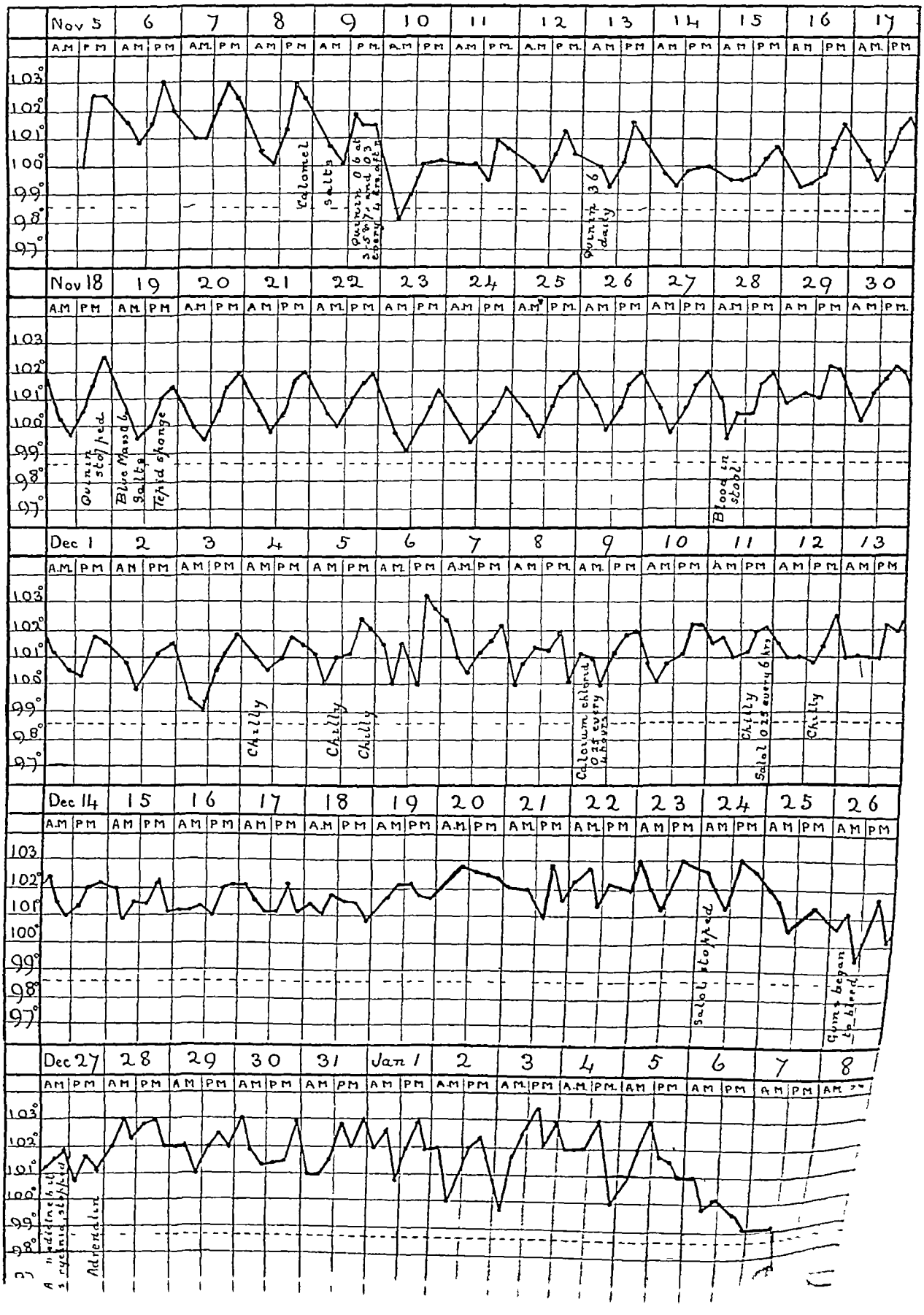
The urine was examined frequently in the course of the disease, and only toward the end did it show any albumin At no time was bile present after the first examination. The blood counts showed a slowly, but steadily, increasing anemia of slightly chlorotic type, and a remarkable leucopenia, the white cells never being above 3,800, a week before his death, falling as low as 1,340, the different forms bearing a normal percentage relation to each other The last count showed 2 670 000 red cells, poikilocytes, microcytes, macrocytes, and a few polychromatic red cells No nucleated red cells at any time.

Although no malarial organisms had been found in his blood, as he had a very regular afternoon rise and morning fall of temperature associated with sweating, his guaiacol was stopped November 8 and he was given a full dose of calomel, followed by salts, and on November 9, was given quinin, 0 6 gm (gr x) at 3, 5 and 7 p m, and then 0 3 gm. (gr v) every 4 hours afterward His temperature dropped to 98 F and stayed below 100 F for 24 hours, when, in spite of the continued administration of quinin, it began its up-and-down course again, so that on November 13, the 0 6 gm was given at 6 8 and 10 p m, and the next day at 12 m, and 2 and 4 p m, and afterward continued at 4, 8 and 12 a. m and p m Under this dosage, the temperature remained below 100 F for 24 hours only, and then again began its up and down course, so that by November 18 its range was between 99 2 and 101 8 F Quinin was then abandoned

November 30, at Dr Stockton's suggestion, blood was taken for culture purpose Drs Nelson G Russell and C A. Bentz made the blood studies At no time did the patient's blood stop the motion or cause clumping of typhoid bacilli

Cultures from the blood taken at this time gave short motile bacilli, which did not react to the agglutination test with known typhoid blood, and did react with the patient's own blood. The bacilli at first did not have the characteristics of the colon bacillus, and it was concluded that we had to do with a paratyphoid septicemia Under subsequent cultivation the organs developed the characteristics of the *Bacillus coli communis*

* Read in the Section on Practice of Medicine of the American Medical Association at the Fifty seventh Annual Session, June 1906


Nov 5 6 7 8 9 10 11 12 13 14 15 16 17
AM PM
103° 102° 101° 100° 99° 98° 97°
Calomel
salts
Quinine 36 daily
Nov 18 19 20 21 22 23 24 25 26 27 28 29 30
Quinin stopped
Blue Mass & Salts
Tepid sponge
Blood in stool
Dec 1 2 3 4 5 6 7 8 9 10 11 12 13
Chilly
Chilly
Chilly
Calcium chlorid 0.25 every 4 hours
Chilly
Salol 0.25 every 6 hrs
Chilly
Dec 14 15 16 17 18 19 20 21 22 23 24 25 26
Salol stopped
Gums began to bleed
Dec 27 28 29 30 31 Jan 1 2 3 4 5 6 7 8
Adrenalin

November 28 Blood appeared in the patient's stool and afterward proved constantly present by the guaiac test, and could occasionally be detected by the naked eye.

From the beginning it had been difficult to keep the man's tongue and gums clean, there being a great tendency to formation of sordes December 26 his gums began to bleed, and, in spite of careful local treatment, in which a most competent dentist was associated, a terrific hemorrhage occurred on December 31, from which the patient did not rally, but steadily sank until his death, at 4 a m. January 8

There are one or two things in the course of this case that I think are worthy of emphasis The first is that the character of the temperature curve, with the occurrence of sweats, the enlargement of spleen, the anemia and leucopenia, very strongly suggested malaria of an estivo-autumnal type The study of the blood did not reveal the plasmodium, and the therapeutic test with quinin was a failure From November 28, when blood first appeared in the patient's stool, calcium chlorid was administered regularly in full doses until the man died with profuse hemorrhage from the mucous membrane of the mouth The local use of adrenalin had only a very temporary effect in the attempt to control the hemorrhage

In the second week in December, on account of the pronounced leucopenia, yeast and, later, Vaughan's nuclein, and finally cinnamate of sodium were administered and the leucocytes continued to drop in number

The patient complained of no pain at any time during his illness, nor was there any tenderness anywhere, except very slight tenderness over the liver The only anatomic abnormality which could be demonstrated during life was the slight enlargement of liver and spleen The man's mind remained clear, and he was cheerful up to ten days before his death, when the bleeding from his mouth began to be severe

REPORT OF AUTOPSY

The autopsy was performed seven hours after death by N G Russell and C A Bentz Dr Conrad Diehl was present

External Appearance—Usual postmortem lividity, rigor mortis moderate, body considerably emaciated, skin, yellowish tint

Lungs Left lung crepitated, except at the base The posterior part was intensely congested, somewhat friable, on section exuded considerable bloody froth Right lung was somewhat heavier than normal, the upper and middle lobes were emphysematous The lower lobe was large, dark in color, quite friable, did not crepitate, on section exuded bloody serum

Heart Small, pale, muscle was about normal thickness, ¾ inch, of a brownish gray color, soft, friable and flabby The muscle of the right side was thin, in some places it was almost entirely replaced by fat The valves appeared normal

Aorta and Blood Vessels Moderately sclerosed

Suprarenal Glands Normal

Kidneys Left kidney was large (swollen), pale, capsule stripped easily Cortex was somewhat narrow, the blood vessels and medullary rays were distinct The right kidney was the same as the left The ureters appeared normal

Spleen Large, soft, friable Malpighian bodies and trabeculæ were not distinct

Gall Bladder Small, thickened and filled with thick, dark green bile No calculi in either ducts or bladder

Liver Size about normal, pale, yellowish color and firm

Lymph Nodes Mesenteric, peribronchial and thoracic, lymph nodes were large reddish in color and soft

Intestines The lower part of the ileum and the cecum showed congestion of the mucous membrane The solitary follicles and Peyer's patches were somewhat swollen, but not ulcerated

Smears and cultures were made from the spleen, lymph nodes, liver and heart blood

Pieces of tissue from the spleen, liver, kidneys, lungs, pancreas, lymph nodes, intestines and heart were preserved in hardening fluid

Histologic Examination—The tissues were hardened in Orth's fluid, embedded in collodion, sectioned and stained with hematoxylin and eosin The following is a brief summary of the findings

Lungs Hypostatic pneumonia of the lower right lobe and posterior border of the left lung Emphysema of the anterior and middle lobes of right lung

Kidneys Parenchymatous nephritis

Heart Fatty infiltration

Spleen Congested

Liver Fatty and cirrhotic

Lymph Nodes Medullary infiltration and some hyaline degeneration

Gall Bladder Thickened

Bacteriologic Examination—Cultures from the organs and tissues gave short motile bacilli, having the structural and morphologic characteristics of *Bacillus coli communis* The organisms isolated from the blood during life (November 30, 1905) had the same cultural and morphologic characteristics as those isolated from the organs and tissues at autopsy The agglutination (blood) test was positive with both sets of cultures

Summary—The man had a septicemia due to an organism belonging to the *Bacillus coli communis* group This organism in the beginning did not have the characteristics of *Bacillus coli communis*, but under subsequent cultivation developed them The organs and tissues presented the gross lesions of septicemia

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BERIBERI, ITS ETIOLOGY AND PREVENTION *

LOUIS H FALES, M D

MADISON, WIS

Beriberi being a disease more particularly of the tropics and rarely seen in America, it may be well at the beginning of this paper to give a short description of the disease, so that those who are unfamiliar with its manifestations may bear in mind a picture of its principal characteristics

PATHOLOGY

Beriberi may be described as an acute or subacute infectious disease occurring endemically or epidemically usually in tropical countries Its chief characteristic is a sensory-motor paralysis due to an involvement of the peripheral terminations of the sensory and motor nerves The peripheral terminations are usually affected in the following order The terminations of the vagus in the heart and lungs, the cardiac accelerator, those which have to do with the knee jerk, the branches of the peronei and anterior tibial, the muscles of leg and thigh, the extensors of the wrists and fingers, etc After an incubation period of from 7 to 21 days, the patient begins to complain of malaise, loss of appetite, weakness, and pain in the lower part of the chest or the epigastrium Vomiting may occur and sometimes diarrhea

To a physician who is a novice as to beriberi, the foregoing symptoms would only indicate an attack of acute indigestion, to the physician who is acquainted with beriberi and especially if the disease is prevalent, they would be very suggestive The symptoms resembling acute indigestion are soon followed by sensations of feverishness or chilliness, although there is no pyrexia The uneasiness in the epigastrium soon becomes a dull heavy boring pain and is accompanied by distention of the epigastrium The pulse becomes greatly accelerated

* Read before the Central Wisconsin Medical Association July 31 1906

and if the patient exercises only slightly, dyspnea is usually observed In from a few hours to two or three days more pronounced nervous symptoms begin to appear The knee-jerk is found to be absent, although it is occasionally exaggerated Patient complains that his legs feel heavy On walking the foot flops to the ground at each step, showing that the anterior tibial and peroneï have become involved Areas of anesthesia appear The paralysis spreads rapidly upward to the thigh, hips, fingers, arms, etc Edema may soon appear, beginning in the legs, depending on the implication of the vasomotor fibers of the vessels of these areas There may be tenderness on pressure over the affected areas The nerves of the circulatory and respiratory systems become more markedly involved The heart becomes more irritable and palpitation occurs on the slightest exertion, with a weak and rapid pulse The respiration becomes hurried even when at rest Pulsation over the precordia and carotids becomes pronounced The area of cardiac dulness increases toward the right The cardiac impulse becomes diffuse Signs of engorgement soon appear Lips and finger nails become blue There is marked dyspnea Patient gasps for breath The face shows great anxiety Temperature becomes subnormal Patient succumbs to cardiac or respiratory failure The mind is clear to the end This description corresponds to the usual subacute variety

There is a pernicious form, however, the symptoms of which vary considerably from the foregoing Loss of appetite, malaise, pain in the epigastrium, etc, may usher in the attack as in the subacute cases, but the peripheral terminations to the vagi in the stomach and heart become so rapidly involved that the patient dies often within a few hours, before other symptoms as peripheral paresis and edema appear There are other forms of this disease, as the atrophic or paralytic, and rudimentary forms but time will not allow a description of these in the limits of this paper This description, however, will be sufficient to make what follows more comprehensive

SERIOUS CHARACTER OF BERIBERI

The importance of the prevention of beriberi, especially in the tropics, is forcibly demonstrated by the following facts

Prior to 1884, an average of 33 per cent of the available strength of the Japanese navy was continuously disabled on account of beriberi During the war with China in 1894, 45 per cent. of the Japanese army were made non-efficient for the firing line on account of beriberi Finally in 1904 and 1905, in the Japanese army nearly one-half of the sickness, or 24 per cent of the entire sick and wounded, consisted of those ill with beriberi, amounting in round numbers to nearly 85,000 men

This disease must not only be reckoned with in military movements in the tropics, but is also a factor determining to a great measure the success of many public and private undertakings In the mines of the Federated Malay States a large percentage of the contract laborers are almost continuously disabled on account of beriberi In Java many of the laborers are likewise disabled and in the Philippines during the construction of the Benguet road to Baguio the ranks of the laborers were considerably decimated on account of the same insidious disease

THEORIES AS TO ETIOLOGY

On looking over the voluminous literature of beriberi I am struck with the diversity of opinions and theories advanced as to the cause of this disease and its prevention

The most important theories promulgated as to the etiology of beriberi are

1 That beriberi depends on the nutritive value of food

(a) Kakaki claims to have banished beriberi from the Japanese navy by increasing the proportion of nitrogen in the ration During a period before Kakaki's changes, about one-third of the entire strength of the navy, became affected during the year, while after the change 1/63 were affected by the disease

(b) Several French authorities believe that beriberi is due to a scarcity of fat It is claimed that an extensive epidemic of the disease at Chaudabun, Siam was arrested by the increase of fat to the ration

2 That beriberi is caused by a toxic agent taken in with the food has many advocates Gelpke believes the toxic agent to be dried fish, Muira, raw fish, Grimm, infected fish, others that the toxin develops in moldly rice

3 Carbon dioxid Ashmead[1] has written several articles trying to prove that the excessive inhalation of CO_2 is the cause of beriberi

4 That beriberi is due to an infection by protozoa Glogner and Heanley advocate this theory Heanley[2] draws an analogy between malaria and beriberi which is suggestive

5 The arsenical poison theory is strongly advocated by Ross[3] He believes that beriberi is a neuritis caused by the ingestion of arsenic

6 That beriberi is caused by a specific germ probably bacterial, has many advocates There is great diversity of opinion, however, as to how the micro-organism enters the body or whether it enters the body at all

(a) Manson[4] believes that the organism exists in some culture media outside the body, that the toxin which produces the disease enters the body not in the food or drink, but through the skin or by inhalation

(b) Pekelharing and Winkler[5] believe that a germ is introduced in the body but that the bacterium to produce the disease must be introduced by repeated infections

(c) According to Braddon beriberi is due to the ingestion of a specific germ which develops in growing rice

(d) Hamilton Wright[6] maintains that the specific micro-organism is not a special habitat of any particular food but that it may be ingested with contaminated food or drink Having gained access by way of the alimentary canal it becomes localized in the mucosa of the stomach and intestines There it elaborates an extracellular toxin which being absorbed produces the symptoms of beriberi

BACTERIOLOGY

Several authorities have described a specific micro-organism as the cause of beriberi Pekelharing and Winkler describe a white staphylococcus, which the-

1 Contribution to the Etiology of Beriberi Univ Med Mag Phila 1892-3 v p 153

2 Some Analogies which Favor the Protozoal Hypothesis of Beriberi Indian Med Gaz Calcutta 1907 xl pp 212-14

3 Arsenic in the Hair of Beriberi Patients from Lancet Brit Med Journ 1902 i 920

4 Prophylaxis and Treatment of Beriberi Brit Med Journ Lond 1902 ii p 870

5 Mittheil über d Beriberi Deutsch Med 1887 xiii

6 Inquiry into the Etiology and Pathology of Tropical Diseases Trop Med Lond 1907 viii pp 101-1

claimed to have isolated from the blood of beriberi patients Hunter[7] describes an organism which resembles very closely that described by Pekelharing and Winkler Ross[8] describes an angular diplobacillus which he claims to have isolated from the blood and cerebrospinal fluid of a large number of beriberi cases

Okato and Kokubo have recently reported the finding of a coccus in the blood and urine of beriberi patients Out of 129 cases examined, 65 were positive, both as to cover-glass examinations and cultures In 34 both were negative In 11 the microscopic examination alone was positive In 19 the cultures were positive and the microscopic examination negative

None of the above work has been confirmed, but the kakkecoccus of Okato and Kokubo has been reported too recently to make it certain whether or not the true micro-organism of beriberi has been discovered Herzog,[8] in experimenting with this coccus in Manila has, according to the last reports, come to no positive conclusions

According to this résumé the older authorities placed great stress on food as a factor in causing beriberi while more recent writers are inclined to disregard food entirely and to consider beriberi only in the light of a disease caused by a specific micro-organism After an extensive study of the disease in the Philippines and a careful consideration of the literature I believe that the pendulum has swung too far and that food must still be considered in determining the etiology of the disease

How can Wright[9] and Manson[4] sweep aside the experience of so many able men who have suppressed beriberi by certain changes in the diet? Was Takaki's triumph in eradicating beriberi from the Japanese navy, a feat considered one of the greatest successes in preventive medicine of modern times, only a coincidence? Can Manson or Wright cite such an overwhelming success in the suppression of beriberi by carrying out their theories? Wright[9] claims to have eradicated beriberi from the Kuala Lumpur gaol by instituting certain hygienic reforms, as the frequent disinfection of the prison, the better care of fecal discharges, better ventilation, etc, but Travers,[10] writing some months after Wright's report, denies that Wright's reforms were carried out and that the suppression of beriberi was due to other causes

BERIBERI IN BILIBID PRISON, MANILA, P I

This report, based on the epidemic of beriberi which occurred in Bilibid prison, Manila, during which there were 5,448 cases of the disease, is written for the purpose of showing that food as a factor can not be eliminated in determining its etiology

Bilibid prison is the penitentiary for the entire Philippine archipelago and also served as the city jail At the time of which I write the number of prisoners ranged from 1,700 to 2,000 The prisoners consisted mostly of the several Christian tribes of the islands, but the Moros, Igorrotes and Negritoes were also represented Among the prisoners were also found Spaniards, Chinese, Japanese, Indians, American negroes, Americans and Europeans The officers of the prison were a warden, two assistant wardens, and an attending physician The warden was supreme in all matters The physician, although having charge of the sick, had only advisory power in regard to sanitary matters, rations, etc[11]

Previous to the epidemic of beriberi, which started in December, 1901, there had been but few cases in the prison For some months there had been no deaths from this cause, but the disease might be said to be endemic, for it was seldom there were not one or two cases In December it was noticed that a great many prisoners began to complain of pain in the epigastrium, loss of appetite, and malaise It was first thought that the new ration, which had recently been instituted, was causing indigestion When, however, symptoms of heart and respiratory failure with paresis began to appear, the affection was soon recognized The disease did not seem to make its appearance in any special portion of the prison, but all parts seemed to be affected simultaneously

In regard to race, the Filipinos suffered most severely The Chinese were almost exempt, only one or two contracting the disease, while the Americans were entirely immune

The epidemic spread rapidly While in December there were in the prison 52 cases of beriberi, with 2 deaths, in January there were 167 cases with 12 deaths

To determine the cause of the epidemic and institute preventive measures was now the problem Was the sudden appearance of this epidemic due to insanitary conditions, as overcrowding, had some new source of infection suddenly gained entrance into the prison, was it due to meteorologic conditions, had the recent change of ration been the determining cause? These questions and others presented themselves for solution

The first measures tried for the suppression of the epidemic were along the lines of sanitation and disinfection To begin with, all beriberi cases were, on the first manifestation of the disease, transferred to certain quarters set aside for beriberi Overcrowding was remedied as much as the available room would permit The entire prison was disinfected several times and certain portions many times Platforms floors and walls in all the buildings were scrubbed or sprayed with carbolic acid or 1/1 000 solution of bichlorid The prisoners' blankets, mats, and everything belonging to them were soaked in a solution of 5 per cent carbolic acid and then dried in the sun Before returning to their quarters the clothing of the prisoners was removed, each prisoner given a full bath with 1/2,000 bichlorid solution, after which fresh clothing was provided The buildings and quarters, clothing, bedding and prisoners were not only disinfected, but a large portion of the prison grounds was drenched with a saturated solution of chlorid of lime To avoid possible infection of contaminated hands and dishes, immediately before eating each prisoner washed his hands and dish in water, bichlorid solution 1/1 000, and then in water This routine of disinfection was continued several months, but in spite of it

7 Hunter W K. Bacteriology of Beriberi Glasgow Med Jour 1897 xlviii p 116

8 'Beriberi in the Japanese Army During the Late War The Kakkecoccus of Okata Kokubo Philippine Jour of Sci, Febru ary 1906.

9 Wright H Successful Application of Preventive Measures Against Beriberi Jour Hyg., Cambridge 1905 v pp 129 133

10 Relating to the paper entitled "The Successful Application of Preventive Measures Against Beriberi by H Wright Jour Hyg Cambridge 1905 v pp 556-539

11 The same defects exist in regard to the powers of physicians in the Philippine Civil Service as exist in the Army In all departments physicians have over them those higher in authority who are not physicians The physicians may suggest, but their suggestions and recommendations are often not complied with It was unfortunate that during the epidemic of beriberi in Bilibid Prison the physician was greatly handicapped by the fact that recommendations in regard to food and sanitation were often turned down by the warden

and other sanitary measures employed, beriberi did not abate, and at times seemed even to increase [12]

The result of the above experimentation shows that at least the epidemic in Bilibid was not due solely to a place infection as advocated by Manson, for 1 The most thorough disinfection had no effect in reducing the number of cases 2 A change in location of the prisoners was not necessary to bring the epidemic to an end. For some months previous to December, when the epidemic began to wane there had been no disinfection

Overcrowding had little or no effect on beriberi in Bilibid prison, for 1 During the time of the epidemic certain buildings which were the most crowded showed no greater proportion of beriberi cases 2 Beriberi cases did not diminish when crowding was lessened 3 About two years after the epidemic had ceased, when the prison contained over 4,000 prisoners instead of 2,000, and was crowded far beyond its capacity, there was no increase of beriberi, although the disease was endemic at the time

The epidemic could have been due to no new source of infection gaining entrance to the prison, for all portions seemed to simultaneously be affected, although many of the quarters were widely separated From the chart it is seen that meteorologic conditions had little importance Hamilton Wright's theory that the infective agent is contained in the excreta of the patients, and that the infection results from fecal contamination, would have been practically impossible during a portion of this epidemic because for several months during its height, the prisoners' hands and dishes were scrubbed and disinfected in a 1/1 000 solution of bichlorid before eating This was done in July, August and September, months in which beriberi showed no diminution, but rather an increase

The possibility that the epidemic might in some way be related to the food was early considered and the attending physician had several times recommended to the warden that certain changes in the ration be made The warden did not think it possible that such a "good ration" could have anything to do with beriberi, so the request was not complied with Careful observation, however, brought to light a few facts which increased the probability that the ration was to some degree responsible for the epidemic 1 The entire prison ration had been changed in November In December the epidemic began 2 Hospital attendants did not contract the disease 3 Prisoners who worked in the kitchen very seldom contracted beriberi 4 During the cholera epidemic there was an increase of beriberi

In explanation of these facts it was found that in distributing food to patients, hospital attendants often retained more than their share of the vegetables, milk, etc The same was true of those who worked in the kitchen They were able to select their diet to a certain extent As the Filipino is a lover of vegetables, more of these were taken than were given out to the prisoners generally In regard to the increase of beriberi during the cholera epidemic it was suggestive that the vegetables had been greatly cut down at that time for fear of bringing more cholera infection into the prison

In view of the foregoing observations it was again recommended that the ration be changed with the hope that beriberi might be eliminated The recommendation was finally adopted the following October, and by the last of the month the new ration was instituted The effect of the change was almost instantaneous When the change in ration was made the latter part of October there were in the prison more than 100 cases of beriberi and during that month there had been 34 deaths from the disease By the end of December the number of cases had dropped to 14 The number of deaths had decreased to 9 in November and 3 in December Table 1 demonstrates graphically the relations of the changes of ration to the epidemic It is clear, therefore, that the appearance and disappearance of the epidemic were coincident with changes in the ration

TABLE 1.—SHOWING THE MONTHLY NUMBER OF CASES OF BERI BERI WITH DEATHS IN BILIBID PRISON MANILA, P I

Year	Month	Cases	Deaths
1901	November	2	0
Ration changed			
1901	December	52	2
1902	January	169	12
1902	February	1087	16
1902	March	576	15
1902	April	327	15
1902	May	310	19
1902	June	451	17
1902	July	233	13
1902	August	571	24
1902	September	522	31
Ration again changed October 20			
1902	October	579	34
1902	November	476	8
1902	December	89	1
1903	January 1 15	4	0
		5448	229

After the change of ration, about Dec 1, 1901 beriberi, which had hitherto been a negligible disease in the prison, began suddenly to increase Again, after the ration was again changed in October, 1902, beriberi began to decline rapidly and in a few months the mortality, which during certain months exceeded a yearly mortality of 250 per thousand, declined to almost nothing

To study better the reason for these results the ration instituted about Dec 1, 1901, will be compared with the ration substituted the latter part of October, 1902

TABLE 2.—RATION INSTITUTED ABOUT DEC 1 1901 AND CONTINUED TO OCTOBER 1902, WITH ITS NUTRITIVE VALUE

Ration		Albuminate	Fats	Starch	Salts
Sugar	28 35			27 35	14
Bread	151 20	12.09	2 26	74 39	1 06
Rice	453 60	35 43	3 12	377 40	2 26
Beef	226 80	48 52	11 77		3 62
Potatoes	85 05*	1 13	09	11 90	50
Onions	28 35*				
Pepper	5				
Vinegar	10 00				
Salt	18 00				18 00
Ginger root	28 35				
Total gm		97 17	17 24	491 04	26 72

* Potatoes and onions have an average of 56.70

TABLE 3.—RATION SUBSTITUTED IN OCTOBER 1902 WITH ITS NUTRITIVE VALUE.

Ration		Albuminate	Fats	Starch	Salt
Sugar	28 35			27 35	14
Bread	302 40	24 18	4 53	148 78	1 03
Rice	227 15	17 71	1 [illegible]	18 87	1 13
Beef	226 80	48 52	11 [illegible]		3 62
Dried fish	56 70	7 08	85		[illegible]
Potatoes	113 07	2 38	14	[illegible] 09	1 19
Onions	10 06	1 84	20	[illegible]	70
Pepper	5				
Vinegar	10 00				
Salt	18 00				18 00
Ginger root	28 35				
Total gm.		101 71	[illegible]	[illegible]	[illegible]

12 This disinfection was not done entirely on account of beriberi, but also for the purpose of stamping out an epidemic of Asiatic cholera which had gained a foothold in the prison.

TABLE 4.—NUTRITIVE VALUE OF RATIONS IN TABLES 2 AND 3 COMPARED WITH THAT OF VOIT, WHICH HAS LONG BEEN CONSIDERED STANDARD RATION

Ration.	Albuminates	Fats	Starch	Salts
Ration previous to October 1902	97 17	17 24	491 04	26 62
Ration after October 1902	101 71	19 37	375 73	29 13
Voit's* ration reduced to Filipino weight 125 lbs	94	45	400 00	

* Voit's ration albuminates 118 gm., fats 56 gm., starch 500 gm. is for a man weighing 151 pounds and working nine or ten hours a day. The Filipinos do not average above 125 pounds in weight, about four fifths of the above average weight. The reduced standard is therefore four fifths of Voit's original standard.

TABLE 5.—COMPARATIVE STUDY OF THE RATIONS AFTER BEING REDUCED TO NITROGEN CARBON AND HYDROGEN AND COMPARED WITH MOLESHOTT'S STANDARD

Ration	Nitrogen	Carbon	Hydrogen	Sulphur	Salts	Nitrogen as to Carbon
Ration previous to October 1902	172 1	4 166 5	61 9	18 2	140 2	1 to 24 2
Ration after October, 1902	209 8	3,816 2	70 4	17 2	185 8	1 to 13 4
Moleshott's ration reduced to correspond to Filipino weight	256	3,789	143	23	172	14 8 1 to 15 *

* 1 to 15 considered to be correct proportion of nitrogen to carbon

TABLE 6 *.—RATION PREVIOUS TO OCTOBER 1902.

Name	Grains.	Rubner's Figures	
Proteids	97 17	x 4.8 =	466 41 calories.
Fats	17 24	x 9 5 =	163 41 calories
Carbohydrates	491 04	x 4 =	1,964 16 calories.
Total calories			2,594 35

TABLE 7 *.—RATION PREVIOUS TO OCTOBER 1902.

Name.	Grains.	Rubner's Figures.	
Proteids	101 71	x 4 8 =	488 208 calories.
Fats	19 37	x 9 5 =	184 015 calories.
Carbohydrates	395 73	x 4 =	1,582 92 calories
Total calories			2 255 143

TABLE 8 *.—VOIT'S STANDARD REDUCED TO FILIPINO WEIGHT

Name	Grains.	Rubner's Figures.	
roteids	94	x 4 8 =	451 2 calories
ats	45	x 9 5 =	427 5 calories.
Carbohydrates	400	x 4 =	1 600 calories.
Total calories			2 478 7

* Tables 6, 7 and 8 show the value of the two rations in calories as compared with the ration of Voit.

FOOD AS A FACTOR IN BERIBERI

A comparative study of the tables suggests two theories as to the cause of beriberi epidemic.

1. Previous to the change of ration in October the individual daily ration consisted of 172.1 gr. of nitrogen, and 4156.5 gr. of carbon, which is a proportion of 1 of nitrogen to 24.2 of carbon. The ration instituted in October contained 209.8 gr. of nitrogen to 3816.2 gr. of carbon, a proportion of 1 to 13.4.

2. In the ration previous to October the average daily amount of vegetable for each individual was 56.7 gm., after October the amount was increased to 221.13 gm.

The first theory would point to nitrogen starvation as advocated by Kakaki as the cause of this particular epidemic. The second theory would place beriberi in the same category as scurvy, that is, deficiency in vegetables as the determining cause of the disease.

In 1883 the cruise of the Ryujo, a Japanese warship, brought the beriberi question to a crisis in Japan and led to Kakaki's investigations. In a voyage of 271 days to New Zealand and South America stopping at the ports of Wellington, Callao, Valparaiso, and Honolulu, 160 cases of beriberi developed out of a crew of 350 men. The year following, at the same season, Kakaki changed the ration and sent the warship Taukuba on the same cruise. The cruise occupied 287 days, the same ports were visited with the same number of days' stay at each port. During this cruise only 16 cases of beriberi occurred.

The nutritive value of the ration during the first voyage was

	Grams.
Proteids	109 29
Fats	15 8
Carbohydrates	622 32

The nutritive value of the ration during the second cruise was

	Grams.
Proteids	196
Fats	43
Carbohydrates	775

Kakaki attributed his success to the increase in the nitrogenous constituents of the second ration over that of the first. It might be well to note that a comparative study of the supplanted diet and the diet ordered by Kakaki shows not only the increase in nitrogenous food as stated above, but also an increase in fresh vegetables. The daily amount of fresh vegetables for each man was increased from 215 gm. to 450 gm.

The question which now confronts us is: What relation has a deficiency of vegetables in the diet of beriberi?

Literature gives us but little on this question. John G. Haggard[13] reports that in New Caledonia water-cress has been found an almost certain cure for beriberi. A study of the epidemic in Bilibid prison seems to favor the lack of fresh vegetables rather than the small proportion of nitrogenous food as the determining cause of beriberi for the following reasons:

1. Those who had access to the preparation of the vegetables and had the opportunity to take more than their share of the same had no beriberi.

2. When the vegetables were almost entirely discontinued for a time as a part of the ration, the mortality from beriberi became higher.

3. Some months after the epidemic had been under control, prisoners from the prison, many of whom had had beriberi, were sent to work on the Benguet road. So many of these were attacked by beriberi that it was found useless to try to use them, and they were returned to the prison.[14] I was unable to obtain their exact ration, but was informed that they were provided scarcely any vegetables.

4. At the time of the epidemic of beriberi in the prison, many of the prisoners suffered with a peculiar form of sickness which we finally decided to be scurvy. The number of these cases exceeded 50. There was gradual loss of strength, the gums became red, spongy and swollen, there were extensive hemorrhages into the muscles, usually into the muscles of the legs. The hemorrhages would be followed by marked induration. The muscles became almost board-like in consistency, and the patient could walk only with great difficulty. On post-mortem, hemorrhages were found in various parts of the body. One case of hemopericardium was noted. On the addition of lemons to the diet of these patients, or increasing the vegetables, they recovered. There is no doubt, therefore, that with the epidemic of beriberi we

13 Lancet 1904.

14 The latency of beriberi is here shown. The majority of these prisoners had had beriberi during the epidemic which was suppressed by dietetic measures. The lack of fresh vegetables again caused the infection which had remained latent in the body, to become active. There was comparatively little beriberi among the laborers employed on the Benguet road.

had an epidemic of scurvy, although in much smaller proportion This, I believe, is very significant

To recapitulate briefly, we have a change in ration followed by epidemics of beriberi and scurvy Certain facts, as stated above, point to a scarcity of vegetables in the ration as a possible cause of the epidemic of beriberi The determining cause of scurvy has long been recognized to be a deficiency in vegetables Therefore, it would seem that these two diseases are somewhat similar in their etiology

The most important anti-scorbutic in vegetables is supposed to be potassium carbonate A comparative estimate of the potassium carbonate in the rations made by the help of Nothnagel's tables, shows an increase of these salts from 10 34 gr in the ration previous to the change in October to 17 39 gr in the new ration, the ration which caused the disappearance of beriberi and scurvy The fact noted by many writers that beriberi is very prone to occur among these people who make rice their main diet is I think explained by the following table

In one ounce[15] of

	Potassium Carb Grains
Large potatoes boiled	1 875
Small potatoes raw	1 310
Lime juice	852
Lemon juice	846
Unripe oranges	675
Mutton (raw)	673
Beef (raw)	599
Corned beef (sl salted)	572
Peas	529
Beef (salted)	394
Onions	333
Wheat bread	258
Cheese (Dutch)	230
Wheat flour	100
Oatmeal	054
Rice	010

From this table it is very evident that when rice is made the staple food, there is little opportunity for the ingestion of potash salts It also explains the disappearance of beriberi when a sufficient amount of vegetables, especially of potatoes, is added to the diet. Accepting the above, how can we explain the appearance of two diseases different in character, but both apparently following a deficiency of potash salts in the ration?

As already stated, beriberi is considered by many as due to a micro-organism Indeed, it can not be doubted that the pernicious form with its rapid onset and sudden death is due to some acute infection which rapidly produces intoxication of certain vital peripheral nerves

The acceptance of a micro-organism as its cause in no way interferes with the theory that the ration is the determining cause of the disease. The micro-organism being present, the disease is produced in an individual whose blood is deficient in potassium salts If the normal amount of potassium salts were present in the individual the micro-organism would not find a suitable medium for its propagation, and the disease would not occur

Much the same theory may be advanced in regard to the cause of scurvy Babes has described a bacillus as the cause of scurvy Rosenell subsequently described a similar bacillus Following the capture of Port Arthur Okado and Saito[16] studying scurvy among the Russian prisoners described a bacillus which they recognized as the origin of scurvy The phenomena of this disease produced in animals by this bacillus, are similar to those of human scurvy

Is it not therefore reasonable to suppose that both in beriberi and scurvy we have a certain condition produced by a deficiency of potash salts and that this condition causes the organism to be peculiarly susceptible to certain forms of infection? With this susceptibility and, under certain conditions, as the presence of the proper organism, race, climate, etc beriberi is produced Under other conditions the result is scurvy [17]

15 Nothnagel's Encyclopedia of Practical Medicine

16 First Report on the Etiologic Investigation of Scurvy" Sei I Kwai Med Jour., Tokio xxiv No 9 xxv No 1

17 For other literature on the subject the reader is referred to Banks Charles E. Scurvy" Reference Handbook of Medical Sciences Buchanan W J Beriberi and Rice Lancet Lond 1898 II 577 Chittenden Physiologic Economy of Nutrition Clark P Beriberi Brit Med Jour Lond I p 1152 Dries C An Outbreak of Beriberi in an Assam Jail Indian Med Gaz. Calcutta 1904 xxxix pp 201 203 Fills W G Contribution to the Pathology of Beriberi Lancet Lond xi p 985 MacLeod Beriberi and Food Brit. Med Jour 1897 II p 147 Morris H C L Etiology of Periberi" Brit Med Jour Lond 1897 II p 500 Seaman L L "The Real Triumph of Japan Appleton & Co 1906 Sodre Twentieth Century Practice N Y 1898 xiv p 469-524 Hunter W K A Note on the Etiology of Beriberi Lancet Lond 1898 I p 1784 Hutchinson Robert Food and Principles of Dietetics Wright H Outline of Acute Beriberi and Its Residual Paralysis Ner Neurol and Psych I Hn 1905 III pp 645-66 Wright H Beriberi in Mariners" Brain Lond 1902 xxvi pp 488 and 512 Yeo I B Food in Health and Disease Chicago W T Keener & Co Reports Weather Bureau Manila 1901 1902.

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BERIBERI ON THE ISTHMUS OF PANAMA *

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It is not the purpose of this paper to give any new information on the etiology of beriberi The subject has been extensively investigated by Pekelharing and Winkler, Manson, Wright and the Japanese school, and germs have been isolated, which, it is claimed, are the cause of the disease These claims, however, have not been substantiated Beriberi has been attributed to faulty diet, to various forms of intestinal parasites, to exposure to the elements, and, finally, in absence of definite knowledge, to malaria The consensus of opinion is that beriberi is a place infection and probably of microbic origin, it is immaterial whether, as Manson states, the germ is located in the soil of infected spots and produces a toxin which gains entrance to the body and causes the symptoms characteristic of the disease, or whether the germ itself gains access to the body and there generates a toxin which produces the disease

The knowledge gained by the Japanese during the late war toward the prevention of beriberi by the changed dietary proves little or nothing, because, as pointed out by Scheube, late professor of the Medical School at Tokio, so many hygienic reforms were put into effect at the same time, which by themselves would tend to improve the general health Beriberi attacks persons living in damp, ill-ventilated and overcrowded buildings, in this locality it has been especially noted that it is common among the pearl fishers With the knowledge gained during the past few years relative to the transmission of disease by the mosquito, is it not extremely probable that this insect plays an important part in the transmission of this disease? To sum up, the causative agent of beriberi has not been determined, nor has the mode of the transmission of the infection been demonstrated

Beriberi is a specific form of multiple peripheral neuritis, with frequent involvement of the cardiopneumogastric system, the latter manifesting itself by both functional and organic (dilatation of the right side of the heart) disturbances

TYPES

The varieties of beriberi on the Isthmus differ in no way from those generally described, namely, 1, the dry, atrophic or paraplegic type, 2, the wet or dropsical type, 3, the mixed forms It is proposed to give an outline of the symptoms of each of these varieties

1 The Dry, Atrophic or Paraplegic Type—Probably the earliest symptoms of beriberi cases is the pain felt in the epigastrium This is often present for several months before other symptoms appear The patient first notices a gradual loss of power in the legs, followed by atrophy of the calves of the legs, with loss of sensation over the front of the tibiæ, the sides of the thighs, and very frequently of the finger tips and of areas on the arms Manipulation of the muscles is painful Patellar reflex and ankle clonus are usually absent. The gait in these cases is ataxic, there is marked toe-drop, causing the patient when walking to raise the foot a considerable distance above the ground and to bring it down with a characteristic flop These patients use various sorts of devices to assist themselves in progression, and when walking with a support place as much of their weight as possible on this support Examination of the cardiac area shows a greater or lesser degree of pericardial effusion, the heart sounds overlap each other, there is a general cardiac irritability, throbbing of the carotids and pulsating movements in the jugular vein.

2 The Wet or Dropsical Type—In appearance this type differs entirely from the preceding The face of the patient is puffy and heavy, the lips cyanosed, and the trunk and members of the body are edematous The urine is scanty and dark colored, of high specific gravity, but in the majority of uncomplicated cases contains no albumin The edema is firmer than that of nephritis It may be localized and disappear from day to day Hydrothorax and hydroperitoneum are frequently present There is rarely any edema of the scrotum The heart shows the same conditions as in the atrophic cases The patellar reflexes are absent and the disturbances of sensation are the same as in the atrophic cases

3 The Mixed Types—In this type of case there is some edema especially of the feet, about the flanks, over the buttocks and sternum and in the region of the neck The patellar reflexes are absent, there are areas of anesthesia over the tibiæ The cardiac symptoms are the same as in the types described above The general health of these patients is not affected The appetite is good, the tongue clean, and unless there are complications there is no fever

SYMPTOMATOLOGY

In reviewing the symptoms of beriberi, the paralyses and atrophy of the voluntary muscles do not play an important part as to the life of the patient The real danger depends on the amount of involvement of the cardiopneumogastric innervation Patients who are up and around one day and apparently doing well suddenly collapse and are dead the following day This is pointed out by Manson as probably due to a chain of circumstances, to degeneration of the heart muscle following nerve destruction, to imperfect systole in consequence of an interrupted nerve supply and to obstruction to capillary circulation in consequence of vasomotor paresis in the pulmonary and in the general circulation When the dilatation once begins, it tends to increase of its own accord, the more the heart dilates the more difficult it is for it to contract Finally, the distension is so great that it fails to contract altogether and death is inevitable Therefore the prognosis in beriberi should always be guarded, for the case that is apparently mild may suddenly develop serious symptoms

BERIBERI ON THE ISTHMUS

The records of physicians who have practiced on the Isthmus for years show that beriberi was unknown here prior to the year 1887 The death registers of the French Canal Company began in January, 1881, those of the city of Panama in November, 1883 There are no records of deaths from beriberi in either of these registers prior to 1887 In that year the canal company imported a number of Chinese and African contract laborers The first death from beriberi among the canal employés occurred in July, 1887 The first recorded death from beriberi in the city of Panama occurred in December, 1887, five months after the first death among the laborers of the French company After its first appearance its spread on the Isthmus was rapid, especially among the poorer classes and among the colored races

The description of beriberi given above refers to the ordinary uncomplicated cases Almost all the cases which have come under observation in the hospitals on the Isthmus show numerous divergences from the above, due to the multiplicity of complications A local practitioner of Panama informed me that 450 severe cases of beriberi which he treated began acutely with chills and fever The fever was of a malarial type and responded promptly to quinin After the fever subsided and the patients attempted to go about their usual vocations, they showed the typical symptoms of beriberi As stated above, probably the earliest symptom of beriberi is the epigastric pain If this is not severe, it would probably not be noticed by the patient unless his attention was afterward called to it by the physician Hence the opinion prevailing among local practitioners that beriberi is of malarial origin To illustrate further the complications in beriberics, it is proposed to add a series of cases, taken from the records of Ancon Hospital, giving the clinical histories and pathologic data, and showing beriberi complicated by malarial fever, ankylostomiasis, chronic nephritis of various types and locomotor ataxia

CASE REPORTS

CASE 1—G M., of Martinique, was admitted to Ancon Hospital Jan 6, 1906 Patient complained of pains in legs and thighs, of burning sensations in the feet, calves of legs were painful on slightest pressure, patellar reflexes were absent Albumin was noted in the urine January 25 The patient died Jan 30, 1906, at 4 10 a m

Autopsy—Autopsy at 8 a m gave the following findings Heart Right heart considerably dilated Intestinal tract Mucosa anemic, no indication of hemorrhage, intestine contained round worms, whip worms, and *Ankylostoma americana* Kidneys Enlarged, soft and greatly congested. Spleen Five times normal size, extremely firm, fibrous elements increased stroma dark brown color, stained smears show estivo autumnal parasites Bone marrow Estivo-autumnal parasites present

Comparing the clinical with the pathologic data in this case, the former justified the diagnosis of beriberi, the latter the diagnosis of acute parenchymatous nephritis, of ankylostomiasis and of malarial fever, estivo-autumnal

CASE 2—J T., Barbadian, was admitted to Ancon Hospital Jan 22, 1906, died Jan 22, 1906

Clinical Diagnosis—Bronchopneumonia

Pathologic Notes—All subcutaneous tissues were edematous Right pleural cavity contained about 200 c c amber colored fluid, pulmonary edema marked, pericardium contained about 150 c c straw colored fluid Heart was acutely dilated Spleen five times normal size deeply pigmented stroma, with miliary patches scattered uniformly throughout. Smear showed many

pigmented malarial parasites of the estivo-autumnal type. Kidneys acutely congested. Intestinal tract. Ankylostoma and round worms.

Pathologic Diagnosis.—Acute beriberi, estivo-autumnal and malarial fever, and ankylostomiasis.

In this case the clinical symptoms justified the diagnosis of bronchopneumonia, the pathologic, the diagnosis of acute beriberi, malarial fever and ankylostomiasis.

Case 3.—F. H., Panaman, aged 23, was admitted to Ancon Hospital Nov. 14, 1905, died Nov. 15, 1905, 8:30 p. m.

Clinical Notes.—Illness began with pain in stomach and weakness in legs, patient was unable to walk, there was numbness of legs and hands, ankles were swollen, there was tenderness over tibiæ and thighs, abdomen was tender, morning temperature 98, evening temperature 100, pulse, 100 to 124, respiration 24, ankylostoma ova present.

Pathologic Notes.—Left pleural cavity contained 100 c.c. of fluid, pericardium 50 c.c. of fluid. Kidneys were congested. Intestines. In mid portion of small intestine were many *Uncinaria americana*, both male and female, duodenum, stomach and remainder of intestinal tract normal. Spleen. Small number of pigmented malarial parasites.

This represents an almost uncomplicated case of beriberi of the dropsical type. The evening temperature of this patient was probably due to the ankylostomiasis, as there were no malarial parasites demonstrable in the peripheral circulation.

Case 4.—Ancon Hospital. Patient showed patellar reflexes absent, marked pain in the calves of the legs on pressure, general anasarca.

Pathologic Notes.—Hydropericardium, hydrothorax and chronic nephritis.

Case 5.—W. J., aged 54, Jamaican, on isthmus 20 years, was admitted to Ancon Hospital March 2, 1905, died March 26, 1905. Patient first noticed swelling of feet, which increased rapidly, extending up the legs, there was considerable amount of pain in calves of legs and knees, patient complained of shortness of breath in walking, temperature normal, pulse, 136, respirations 28 to 36.

Pathologic Notes.—Peritoneal cavity contained about 200 c.c. amber colored fluid, pericardial cavity 60 c.c. amber colored fluid. Kidneys. Right kidney, weight 2 ounces, cortex 7 mm., pyramids pale, capsule stripped with difficulty in places, right kidney as above.

Pathologic Diagnosis.—Chronic diffuse nephritis.

Case 6.—A. G., Colombian, colored, was admitted to Ancon Hospital Jan. 31, 1905, died Feb. 10, 1905. Illness began one and one-half months prior to admission, with swelling in the feet, there was pain in the muscles of the extremities, difficulty in walking and dyspnea.

Examination.—Edema of the ankles and feet, apex beat diffuse, epigastric pulsation with double mitral murmur, pulse 130, great muscular weakness, especially in legs, wasting of calves of legs and thighs, hand grasp weakened, gait ataxic, patient raised legs with difficulty, there was pain on deep pressure of the calves, knee jerk was diminished, there were no anesthetic areas. Urine showed large quantities of albumin, examination of stools showed the presence of ankylostoma.

Diagnosis.—Beriberi and chronic interstitial nephritis.

Pathologic Notes.—Left kidney was very small, capsule adherent in strips, cortex very thin, minute hemorrhage in pelvis, right kidney one-half normal size and same as above. Heart greatly dilated. Stomach mucosa showed minute pin point hemorrhages, also the first eight inches of duodenum showed marked injection and numerous pin head elevations whitish in color. Pin point hemorrhages were very numerous.

Case 7.—J. L., aged 46, American, had used alcohol in considerable amounts for a number of years, he denied venereal history. One month ago patient noticed swelling of ankles. This was followed by loss of power in the legs and irritability of the heart when walking rapidly.

Examination.—Patellar reflexes were absent, ankle clonus was absent, there was pain in calves of legs on pressure, slight anesthesia over tibiæ, Romberg symptom was positive, slight incoördination in movements, Argyll Robertson symptom was negative.

Cases of this character are very often misleading and it is difficult to make diagnoses between incipient locomotor ataxia and beriberi. It is believed, however, that the absence of the Argyll-Robertson pupil would justify the diagnosis of beriberi which was made in this case. The subsequent history has confirmed the diagnosis of beriberi.

In autopsies which show symptoms of beriberi and of ankylostomiasis, examination of the intestines very often shows in the duodenum around the worm a large red patch about 4 cm. in diameter. This is superficial and might tend to give one an idea of some pathologic condition due to disease and not to the presence of the worm.

In several deaths from acute beriberi the mucous membrane of the stomach and the upper part of the small intestine was found hyperemic and at some places hemorrhagic. One postmortem showed innumerable white spots the size of a pinhead scattered over the mucous surface of the duodenum.

TREATMENT

As the majority of beriberi cases originate in damp, ill-ventilated and overcrowded habitations, the first essential in the treatment is removal from the probable source of infection. Patients should be placed in a dry locality in well-ventilated rooms. It is customary in Panama to send such patients as can afford the expense to the Island of Taboga. The climate of this island, situated 12 miles from Panama in the Bay of Panama, has long been noted for the beneficial results to patients who have had attacks of beriberi and malarial fever. Patients should be well fed and bulky articles of diet should be eliminated. The medicinal treatment is entirely symptomatic. Digitalis and strophanthus for the heart, with general tonics and massage and electricity are indicated.

ANALYSIS OF CASES

In examining the records of cases treated in Isthmian Canal hospitals 112 cases of beriberi are tabulated. Of this number 106 patients were males and 6 females. There were 14 deaths among those treated. The admissions to hospital occurred as follows:

1904		1905	
September	1	June	9
October	—	July	7
November	0	August	8
December	—	September	7
1905		October	1
January	7	November	21
February	7	December	14
March	6	1906	
April	5	January	9
May	4	February	4

Ages at admission ranged as follows:

10 to 20	16	60 to 60	8
20 to 30	45	60 to 70	4
30 to 40	24	Not stated	4
40 to 50	11		

The sources of admission were as follows:

City of Panama and vicinity	77	Pedro Miguel	2
City of Colon and vicinity	14	Gorgona	1
Culebra	0	Paraiso	1
Matachin	—	Pueblo	1
Empire	3	Rio Obispo	2

The length of time on the Isthmus outside of the cities of Colon and Panama was as follows:

From Culebra. Five patients had been on the Isthmus upward of ten years. The remaining four had been there one month and two months, and two at five months each.

The Matachin patient, upward of thirty years.

The Empire patients, five months, one and one-half miles and two months.

The Pedro Miguel patients, one seven years, the other four months.

The Rio Obispo patients, one a year and one five days.

The Gorgona, Paraiso and Pueblo patients, one year.

Of the above 112 cases treated in the Isthmian Canal Commission hospitals, 64 patients were employés of the Isthmian Canal Commission Among these 64 there were 10 deaths The morbidity was greatest in the month of November, 1905, when with a total of 22,000 laborers there were 15 admissions to hospital, giving a morbidity rate of slightly more than 8 per 1,000 per annum The mortality rate among commission employés was greatest in the month of June, 1905 In this month there were 10,500 laborers on the rolls Five beriberi patients were admitted to the hospital, of whom 2 died, giving a mortality rate of 2 3 per 1,000 per annum The reader is referred to the accompanying chart, giving

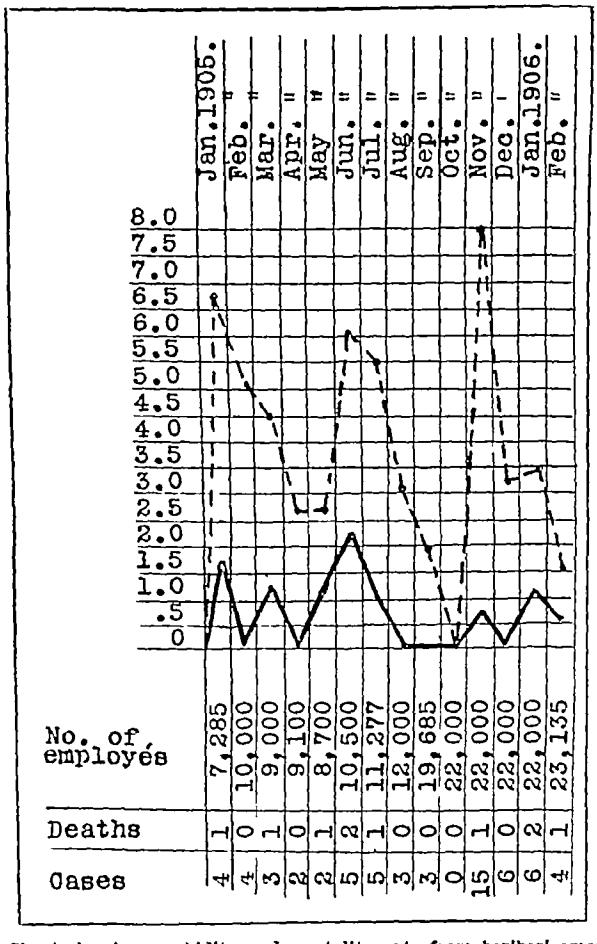

Chart showing morbidity and mortality rate from beriberi among employés of the Isthmian Canal Commission and the Panama Railroad from January 1905 to February, 1906 inclusive Solid line shows death rate per 1 000 per annum Broken line shows morbidity rate per 1 000 per annum

the morbidity rate and death curves for employés of the Isthmian Canal Commission from January, 1905, to February, 1906 inclusive

In looking over the records of the French Canal Company it is impossible to find the morbidity rate for beriberi The mortality rate for the French company in November, 1887, was 22½ per 1 000 per annum Deaths from beriberi were very rare among the employés of the French company during the years 1890, 1891, 1892, 1893, 1894, 1895 and 1896 In 1897, however, the death rate rose to the alarming figures of 54 per 1 000 per annum This occurred in the month of May Comparing this with the mortality rate for yellow fever among the employés of the French company, we find that their highest mortality rate from the latter disease was in 1882 and reached 5 8 per 1,000 per annum, or slightly more than 1/10 that of beriberi To sum up, the highest death rate from beriberi under the Isthmian Canal Commission has been 2 3 per 1,000 per annum, and under the French company 54 per 1,000 per annum

Deaths from beriberi in the Isthmian Canal Commission by nationality

Colombia	18	France	2
Dominica	1	Barbadoes	3
Panama	14	Martinique	6
Jamaica	7	Guadaloupe	1
Africa	1	British Honduras	1
Spain	1	Germany	1
St. Lucia	1	Fortune Island	1
Mexico	3		
Costa Rica	1	Total	64
Grenada	1		

Deaths from beriberi in the French company by nationality

China	65	America	1
Africa	127	England	2
West Indies	25	France	2
Colombia	7	Belgium	1
Cuba	1		
		Total	231

BERIBERI IN THE CITY OF PANAMA.

As stated before, the first death from beriberi in the city of Panama of which there is record occurred in December, 1887 Since that time there has been no year in which there have not been deaths from this cause For the past 8 years, however, there has been a decided increase in the number of deaths It is impossible to compare the mortality rate with the morbidity rate, as these cases have heretofore not been reported The highest mortality rate occurs with great regularity in the last 3 months of each year, namely, October, November and December Beginning with the year 1899 the mortality rate has risen from 4 5 per 1,000 per annum to 5 in 1900, 7 in 1902 and 11 in 1903 It dropped to 8 5 in 1904 and again rose to 11 per 1,000 per annum in 1905 There were 559 deaths from beriberi reported in Panama from 1887 to 1905, inclusive, distributed by nationality as follows

China	114	Chile	1
West Indies	36	Venezuela	1
Colombia (Panama)	308	Nicaragua	1
Mexico	9	Cuba	1
Ecuador	5	America	3
Peru	4	France	3
Costa Rica	4	Spain	2
Salvador	3	Italy	1
Guatemala	2	Sweden	1

As an example of place infection of beriberi in Panama, the Bovedas prison may be cited The ground floor of this building has been used as a prison for many years It is built of stone, is poorly ventilated and at times overcrowded The cases originating in this prison by months are as follows

BERIBERI IN BOVEDAS PRISON

Year	Month	No of cases	No of prisoners
1904	April	1	Not known
	May	0	6
	June	0	23
	July	1	31
	August	1	47
	September	2	53
	October	2	58
	November	2	59
	December	2	77
1905	January	0	67
	February	0	63
	March	3	45
	April	0	49
	May	1	51
	June	4	47
	July	3	67
	August	3	68
	September	1	65
	October	3	59
	November	3	56
	December	0	69
1906	January	0	76
	February	0	77
	March	0	69

Late in October, 1905 the prisoners were transferred

from the prison proper into another portion of the same building, with conditions practically the same as before Reference to the table above shows that after the first month there were no new cases

The question naturally arises that with the presence of beriberi in Panama, and the appearance of sporadic cases in the Zone, what are the chances of an outbreak of this disease among the laborers of the commission, the same as occurred under the French régime? It is believed that the improved sanitary conditions, better habitations, the feeding of the laborers by the commission, this insuring a better dietary, and our increased knowledge of the management of tropical disease, will all tend to render an outbreak of this disease improbable [1]

AN OPERATIVE METHOD FOR THE REDUCTION OF HYPERTROPHY OF THE INFERIOR TURBINATE

OTHER THAN BY CAUTERIZATION OR EXSECTION *

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If the methods of treatment now in vogue for the reduction of hypertrophy or hyperplasia of the inferior turbinate were wholly free from objectionable features it were then, indeed, superfluous to write aught concerning it As it is there are so many, and so serious, objections to each method now commonly employed that it may not be misconstrued if an effort be made to advance some suggestion for its relief other than those generally accepted

Any treatment which primarily gives temporary relief, but whose secondary effects are hurtful, worse, indeed, than the original disease which it is sought to relieve, must be relegated to the rear as soon as another method is brought forward whose primary effect is fully that desired, permanent in nature and followed by no secondary effect whatever except that which is beneficial If it can be proven that such result is attainable without any extraordinary instrumentation, without violence to the patient, while preserving important functionating tissue now often sacrificed in part or *in toto,* then the writing of another page on so hackneyed a subject is fully justified

Before a body of rhinologists it is unnecessary to rehearse the several well-known and accepted functions of the nose In view, however, of the fact that collapse of the alæ nasi so often follows the destruction of the inferior turbinate whether by cautery or by exsection, there must be some physical explanation of the agency by which the patency of the vestibule is maintained If it were muscular action alone that keeps open the vestibule, then the removal of the inferior turbinate would have no injurious action whatever on it, for there is not any connection that I am aware between the inferior turbinate and the muscles of the ala

It is generally conceded that the compressors and dilators of the nasi are very seldom under voluntary control, that they are practically useless structures, unless by patient, long-continued practice they are brought under control of the will, and then only if the inferior turbinate is present I have followed up this observation as closely as it was possible for me to do and I have never seen a case in which the patient whose turbinates were absent learned after their loss to control the alæ nasi muscles It is obvious, then, that muscle action has little, if anything, to do with this condition of the vestibule That the inferior turbinate subserves an important purpose is established by the fact that collapse never occurs when it is present and almost invariably follows its removal

To be liberal in judgment, it would be well to ascribe the duty of maintaining the patency of the vestibule to the conjoined action of the muscles of the ala nasi together with the inferior turbinate, the greater influence by far being exerted by the latter structure

It may be asked why so much importance is urged for this subject It is because of the lamentable condition mental and physical, of the victim of total collapse of the alæ nasi, also because a full appreciation of the part the inferior turbinate plays would probably cause a modification of the methods employed for the reduction of its enlargement

METHODS IN VOGUE

Thus there are presented for consideration the methods now in practice for the reduction of the hypertrophy or hyperplasia of the inferior turbinate and the question if there be any other way to attain this end

Cauterization of the enlarged inferior turbinate with chemical caustics is the oldest and perhaps the most generally used When the electrocautery was first introduced it was adopted with universal enthusiasm, when the street current was adapted to office use it received fresh impetus, and specialist and general practitioner alike attacked everything within the nasal cavity that appeared the least swollen Nostrils were cauterized until only the cicatricial tissue and the bones were left the beautiful, moist, velvety red mucous membrane was converted into a white, dry and functionless tissue and untold misery followed this indiscriminate burning

Now the reaction has fully set in, the indications and contraindications are better understood and more intelligence is used in the employment of this potent agent, while the diffusion of its limitations has caused the general practitioner to fear to employ it with his wonted liberality

In reality the field of usefulness of the caustics is very limited, as is the frequency and extent of their application Their full effect can be measured only after the lapse of an indefinite interval, and then this effect, whether injurious or beneficent is permanent and progressive, should it be hurtful then it is beyond remedy or our power to allay Better in this connection than to quote the results of the histologic examination made by Dr J L Goodale[1] of Boston can not be done Dr Goodale made examinations in a series of cases in which the patients had been previously cauterized for hypertrophy of the inferior turbinate and who had returned later with recurrence of nasal obstruction Briefly abstracted, his findings are as follows Caustic applications cause loss of columnar ciliated epithelium with replacement by cells of the squamous type, they may cause obliteration of canaliculi in basement membrane with formation of connective whose depth depends on the intensity of the cauterization Contraction of this connective tissue constricts the lumen of the ducts of the glands leading later on to cystic dilatation thus explaining the recurrence of the obstruction It follows that repeated applications become progressively less effective

1 I am indebted to Dr Samuel T Darling pathologist Ancon Hospital for valuable pathologic data

* Presented as candidate's thesis, American Laryngological Rhinological and Otological Society

1 Boston Med and Surg Jour 1904 Dec 29

We know, too, that the same injurious effects result from the electrocautery Its action is more profound than that of the strongest chemical caustic Its action can not by any known means be in any way limited or controlled, hence one may get an effect deep and destructive when only a superficial effect was desired and *vice versa,* or it may progress, defying every effort to control it until actual atrophy results When a submucous cauterization is done, its action is not only highly intensified, but the ultimate result will be all the more uncertain It is easy to draw a picture by secondary deduction from this pathologic sequel to cauterization Thus the destruction of the ciliated epithelium loses to the tissues their ciliary function, the formation and contraction of connective tissue, closing ducts and blood vessels, prevents proper radiation of moisture and heat to the inspired air, at the same time the cystic degeneration of the glands thus cut off from duty later on cause recurrence of nasal obstruction Loss of function and blood supply entails loss of materials for the regeneration of the injured tissues, and this failure of recovery of the structural bases of the tissue, added to progressive contraction of the new formed connective tissue, gives at the end advancing atrophy

Notwithstanding all that has been said against it, cauterization has its field of usefulness When, for instance, there is an excessive, long-continued discharge and the swollen tissue shrinks completely under the influence of cocain and adrenalin, or there exists a rapidly alternating nasal occlusion, especially at night when in bed, when the nasal membranes seem only slightly swollen, when the pathologic condition appears insufficient to give rise to symptoms so distressing, yet the relaxation of the tissues when in the recumbent position is complete and the obstruction troublesome It is then that cauterization with one of the chemical caustics is indicated. These cases respond quickly and satisfactorily to a moderate caustic treatment when applied by one skilled in its technic If the reduction is insufficient after one or at most two cauterizations then another method should be considered.

Concerning the electrocautery it would be, indeed, a consummation to be desired if we could all agree with Grayson, who after a severe but well-merited stricture on the use of the electrocautery thus concludes

> They are luxuries, not necessities, and the longer one pursues his work without them the more likely and able will he be to dispense with them altogether

That this sentence is not too severe will be conceded by almost anyone who has observed his cases for several—eight or ten—years, who having seen following even after the most careful application progressive contraction and ultimately atrophy must conclude that this agent is too uncertain, too uncontrollable and too severe for the delicate nasal mucous membrane

That the removal of a portion of the inferior turbinate is at times necessary can not be denied, but that its total ablation is ever justified can not be admitted Time was when this complete ablation was frequently done, perhaps because it was so easily done, with such simple instruments and because it gave for a time the desired result, viz, a widely open nostril

Turbinectomy removes a large area of physiologically active tissue and destroys the arch of the inferior turbinate which gives direction to the inspired air current The mucus secreted is insufficient in quantity to moisten properly the inspired air, the blood supply is insufficient in amount to give the warmth that is so essential to preserve the integrity of the mucous lining of the respiratory tract Filtration of the air current is impossible Subsequent contraction aggravates this condition To a genuine atrophic rhinitis is only one step Later on in many cases collapse of the alæ nasi occurs, adding to the already existing distress the greater evil of absolute nasal occlusion, especially at a time when nasal respiration is most necessary, viz, in sleep and *per contra* when exercising This latter condition is so distressing and has been often observed, yet has received no mention by any author to whom I have had access save in the last edition, the fifth, of Lennox Browne On page 789, in concluding the treatment of hypertrophic rhinitis, he says

> In some cases of hypertrophic rhinitis as well as in many cases of polypi collapse of the nostrils remains as a more or less permanent cause of trouble after the original malady has been removed If unremedied all of the former symptoms are liable to recur

This, so far as it goes, is very good, but one could wish that he had given the physical explanation for so undesirable an occurrence In my experience collapse has not followed removal of polypi, nor has it ever been seen so long as the inferior turbinate has not been removed Therefore, it must be supposed that the presence of the inferior turbinate in some way insures the stability of the intranasal air pressure at a sufficient pressure to maintain a patent vestibule. Some time after the complete removal of the inferior turbinate, in one case it developed as early as three months, the alæ begin to collapse It is noticeable when breathing quickly, as when exercising or in taking deep inhalations, when the flaccid wings collapse, falling in on the septum, completely closing the vestibule like valves, purposely so placed

The probable explanation of this is that the air within the nostril is evacuated before that from without can gain admittance, resulting in a loss of equilibrium, allowing the greater external pressure to force the flaccid alæ nasi against the septum There occurs here what takes place when the air in the middle ear is exhausted and when it can not be quickly renewed, viz, collapse of the ear drum against the promontory Collapse of the wings is seldom seen in cases of atrophy, for here the process is so gradual that ample time is given for gaining compensatory muscle action

This condition of collapse is far worse than the obstruction caused by hypertrophy of the inferior turbinate In the latter condition there are times when some air can be gotten through the nasal cavities, viz, when the air is dry or when exercising These momentary aerations serve to ventilate the accessory sinuses, the Eustachian tubes and to keep the mucous glands somewhat active There are moments of relief With collapse, however, the occlusion is complete and permanent, with the entire train of symptoms following in its wake, insufficient aeration of the accessory sinuses with the well-known dangers entailed thereby The middle-ear catarrh with its tinnitus and its deafness, for which turbinectomy is often done, is undoubtedly aggravated by the absence of any ventilation In fact, cases have been seen in which the progress to a practical total deafness was noticeably hastened Also the same mental symptoms of aprosexia have been observed in this condition as in that attendant on occlusion from intranasal hypertrophy Mouth breathing, with its almost interminable train of distress and associated with the collapsed alæ, so alters the facial expression as to make it appear unnaturally narrow, drawn and pinched, while the voice is usually much changed in tone

AUTHOR'S METHOD

Working in view of this importance of preserving these several functions of the inferior turbinate intact, I have for the past six years done an operation simple in itself, but most efficacious in result and permanent in character, with no hurtful sequelæ to mark its performance or mar its record. Only very recently has anything similar been proposed, so far as my reading has informed me The operation consists in one or more incisions through the mucous membrane of the hypertrophic turbinate well down to the bone, when with a broad nasal saw the bone is cut into to a depth depending on the nature of the bone, whether cancellous or vitreous, which is easily detected by the sensation imparted to the hand If the bone be hypertrophied and dense the cut is carried well down into its substance The nostril is next cleansed, the edges of the incised mucous membrane are carefully packed into the osseous cut which, as above indicated has been purposely made with a broad saw to admit of the introduction of the overlapping edges of the soft parts This adjustment of the tissues is maintained by a carefully placed pledget of cotton saturated in a solution of equal parts of compound tincture of benzoin and flexible collodion. This dressing may remain *in situ* for two or three days when after careful soaking it is as carefully removed The edges of the incision should not be disturbed when the cotton is removed, else the object of the operation will be defeated Rarely will repacking be necessary The direction of the incision will depend on the nature of the enlargement, it may be made from above downward, at the most dependent part of the turbinate upward, or, as is most usually necessary directly into the body from within outward It will be found that following this operation much absorption will occur, so that in the course of a short time the nostril will be sufficient for the full performance of its physiologic function

I have tried the deep incision alone as has been somewhat recently advised, also the removal of a V-shaped section of the mucous membrane side by side with the method I had for so long employed, but it seemed to me that better result was obtained when both the mucous membrane and the bone were included in the incision The furrow in the bone supplies a base for the attachment of the incised membrane, the firmness of the adhesion preventing the sudden distension so common and troublesome in these hypertrophic conditions

In conclusion, the advantages of a procedure of this kind over cauterization with either chemicals or electrocautery, as well as the partial or complete turbinectomy, are

1 Preservation of physiologically active tissues

2 Freedom from disagreeable reaction or complications

3 Absence of shock, since but slight local anesthesia is necessary

4 Freedom from aggravation of existent disease in related cavities

5 Ease and speed in performance, the instruments used being few and simple

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Medical Organization.—Complete organization of the medical profession, wisely guided and administered, will mean for the people better educated and trained physicians, better and more wisely administered public health and sanitary measures, more careful attention to the protection and the saving of human life —Philip Mills Jones, M.D , in the *Bull of Am Acad of Med*

CELLULITIS AND MYOSITIS OF THE ABDOMINAL WALL, SIMULATING INTRA-ABDOMINAL CONDITIONS

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The cases which follow illustrate very well how closely conditions of the muscular layers of the abdominal wall, accompanied by symptoms most commonly referable to processes inside the abdomen, may be mistaken for the last named conditions

CASE REPORTS

CASE 1.—S S., aged 18, was admitted to the New York Hospital, Dr Bolton's service, July 21, 1903, complaining of pain on the right side of the abdomen.

History.—Family history negative, past history negative, appetite good, bowels always regular

Present Illness.—One evening, eight days before admission, the patient ate a large quantity of peanuts, cakes, candy and other Coney Island delicacies The next morning he awoke with pain in his abdomen At first the pain was diffuse, but later became localized on the lower right side of the abdomen It was cramp-like in character, the cramps coming in paroxysms The pain then disappeared for about three days, and the patient was up and about with only a dull ache in the right side On the fourth day it returned with greater severity and remained localized on the lower right side, which gradually grew tender to the touch At the onset the patient vomited, and he has vomited at intervals since, but at no time has the vomiting been distressing The bowels were constipated, but have moved freely by medication. He has had fever, but no definite chill.

Physical Examination.—The patient was evidently in considerable pain The face was flushed, pulse twenty-six to the quarter, good volume, regular in force and rhythm, temperature, 103 6 F The heart and lungs were normal The abdomen was slightly distended. The respiratory movements were limited above the navel and absent below it. On palpation the abdomen was everywhere slightly tender In the right iliac region there was a hard, readily defined mass, extending from the anterior border of the rectus well into the flank and from the level of a line drawn through the navel down to within one inch of Poupart's ligament. This mass was extremely tender, the slightest pressure causing the patient to wince with pain In this area there was also marked muscular rigidity Very gentle percussion over the mass elicited a tympanitic sound Hernial rings and genitalia were normal, and the rectal examination was negative. The leucocytes were 16,000

The case was diagnosed as acute appendicitis with the formation of an abscess, and the patient was prepared for immediate operation

Operation.—An incision 10 cm long was made over the center of the palpable mass down through the external oblique where a small quantity of serosanguineous slightly purulent serum was found on the internal oblique muscle which was edematous and rather markedly indurated On cutting through it considerable edema and induration was found in the subperitoneal tissue, and the peritoneum itself seemed swollen and edematous. The peritoneal cavity was then opened and the intestines, cecum and appendix found to be uninflamed As the appendix was a very long one, it was removed The peritoneum was then carefully closed The muscular and fascial layers were loosely approximated, a drain was inserted in each angle of the wound down to the peritoneum, and the skin closed loosely with silk

Subsequent History.—The wound discharged a reddish grumous material composed of pus cells and shreds of muscle for about 12 days and the skin wound broke open the sutures cutting through the skin This discharge then gradually ceased and the wound rapidly granulated healing in about four weeks from the time of the operation. The pain disappeared on the second day following the operation The temperature ranged from 101 to 103 until suppuration ceased and then dropped to normal The patient's recovery was uneventful

When he was discharged from the hospital there was no induration nor tenderness in the region of the previously defined mass, and the abdominal wall seemed solid A culture taken at the time of the operation yielded a pure culture of the *Staphylococcus pyogenes aureus*

CASE 2.—J S, aged 19, was admitted to Dr Bolton's service at the New York Hospital, Aug 11, 1903, complaining of pain in the lower left side of the abdomen

History.—Family history was negative, past history was negative except for a little pain occasionally felt in the hypogastrium at the end of micturition There was no hematuria, increased frequency, etc, and patient denied venereal disease

Present Illness.—About four weeks before admission the patient had severe cramp like pains over the whole lower abdomen, which later became localized in the lower left quadrant and remained dull and aching in character With these pains he had no chill nor fever In a few days he was able to be about again with no other symptoms than an occasional dull ache in the lower left abdomen Four days ago, however, he was again seized with severe cramp like pains over the entire abdomen, which later became localized to the left lower quadrant, felt very sick, had a slight chill and was told by his doctor that his temperature was 104 F This pain also subsided gradually into a dull ache, localized on the left side. He had slight nausea during the last attack, with headache, and a bad taste in his mouth, but no vomiting The appetite had been good and the bowels regular There was no pain on defecation and no blood or mucus was noticed in the stools There were no urinary symptoms other than the slight pain in the hypogastrium at the end of micturition (v.s) which was no worse during the attacks of abdominal pain. There was no pain, nor swelling of testicles, no lameness nor pain in the back or hip, and no pain on walking or standing The patient thought that the dull ache on the left side was slightly more marked during the process of assuming the erect posture after bending forward He had had no night sweats and was not sure, but thought, he had lost some weight and strength

Physical Examination.—The patient was well nourished, the tongue was clean, pulse was 25 to the quarter, of good volume and regular in force and rhythm, temperature, 100 F, heart and lungs were negative, the abdomen was scaphoid, the respiratory movements were well marked throughout On palpation the abdomen was soft and nowhere tender except over a small hard mass just outside the border of the left rectus muscle and between it and the anterior superior iliac spine and located about half way above and below a line drawn across the abdomen through the anterior superior iliac spines This mass was somewhat tender, hard and apparently attached to the abdominal wall There was no local redness, swelling, nor pitting of the skin, and no palpable local increase in surface temperature Deep palpation elicited nothing but increased local pain The genitalia were negative. The rectal examination was negative and a catheterized specimen of urine was entirely negative Thorough examination of the spine, left hip joint and the left ilium yielded no signs of disease in those localities

The diagnosis was not clear, but wavered between an intra abdominal condition and a process local to the abdominal wall Operation was proposed and accepted

Operation.—An incision four and one-half inches long was made parallel to Poupart's ligament and about three-quarters of an inch above the anterior superior spine through the center of the palpable mass down to the external oblique, which was found to be edematous and grayish white in color On incising the external oblique parallel to its fibers a small quantity of serum gushed out and the internal oblique was found to be edematous also, hard and indurated, and of the same color as the external oblique The internal oblique was cut, and palpation revealed no intraperitoneal mass, so the peritoneum was not opened. A piece of muscle was then removed for examination and a culture was taken. The wound was loosely closed and freely drained from both angles

Postoperative History.—For about 10 days the wound discharged a serosanguineous exudate, which never became purulent, and then began to heal rapidly *The urine* was negative throughout, and the stools were normal The temperature ranged from 99 to 101 F, until the discharge ceased, and then fell to normal

When discharged from the hospital, there was no induration except that immediately along the line of the scar, and nothing could be felt in the region of the previously described mass Nor did the patient feel any pain

The culture made at the time of the operation was unfortunately lost Sections of the piece of muscle removed showed a chronic interstitial myositis with hyaline degeneration of the muscle fibers, edema of the intramuscular connective tissue and a well marked infiltration by small round cells and leucocytes.

In the first case the indiscretion in diet, the onset of general abdominal pain with vomiting and constipation, the pain at first general and later becoming localized on the right side, its subsidence after free catharsis and its subsequent return with greater severity and more definite localization on the right side, the coated tongue, fever and rapid pulse, the tender hard mass in the region of the appendix, and the increase in the number of leucocytes all seemed to point definitely to some acute involvement of that organ On retrospection after operation the only factors (local redness, heat, swelling and edema) which might have helped in diagnosis, were not present in a degree sufficiently marked to be noted in the examination The only fact which seemed noteworthy was the very marked degree of local tenderness immediately over the mass proper, a condition, however, not at all incompatible with an acute inflammation in the appendix leading to abscess formation

In the second case the localization of the pain on the left side, with practically no other features than the slightly increased amount of pain while assuming the erect posture and the increased pain on deep pressure, rendered less liable so radical an error as in the first instance In this case local heat, redness and edema were looked for definitely and were not found, and retrospection after operation gave no additional data which would prevent an error in diagnosis in a subsequent case of a similar nature Both cases were similar in the history of their onset and the absence of any explainable etiologic factor They differed slightly in their subsequent course, Case 1 being the more acute and simulating very closely indeed the features of an appendicular abscess, while Case 2 was more chronic with a quiescent period of a little over three weeks before any acute symptoms returned and presented the features of a more or less chronic condition with acute exacerbations

REVIEW OF LITERATURE

The literature on conditions of this character is, as far as I could find, rather meager Fouque[1] describes a case of phlegmon of the aponeurotic and muscular layers of the abdominal wall in a male, aged 57, in which the etiology was not known, but the patient was ill with what appeared to be a grave typhoid until local redness, tumefaction, and swelling appeared in the lower half of the abdomen This was incised and the pus evacuated, following which the recovery of the patient was uneventful

Sonnenberg[2] mentions the case of a boy, aged 17, who while in apparently good health, was seized with severe pain in the right lower abdomen This gradually subsided but, eight days later, while at stool, he was again seized with sharp abdominal pain and sent to the hospital with a diagnosis of perityphlitis His temperature was 38 9 C On the next day the temperature fell to normal and the pulse remained good The abdomen was

1 Gaz. d Hôp Paris, 1884 lvii p 315
2. Berlin. klin. Wochschr xxiv, 1897 p 810

soft except for a large hard mass just below the costal margin extending from the right anterior border of the rectus muscle into the flank and separated from the liver dulness by an area of tympany in the nipple line, but continuous with it in the anterior axillary line At the operation an abscess, the size of a hen's egg, which discharged yellowish-white sterile pus and contained broken down fat and muscle, was found between the external and internal oblique muscles The surrounding muscle was hard and indurated The peritoneum was apparently uninvolved and soft, and there was no underlying mass or resistance Examination of a piece of muscle removed at the operation showed the pathologic features of a chronic interstitial myositis The patient's recovery was uneventful The revised diagnosis was chronic interstitial myositis of the external and internal oblique muscles

Spellissy,[3] in an article devoted to conditions mistaken for appendicitis, quotes the above case of Sonnenberg and a second case (his Case 7) as follows

J A. Hopkins in the *New England Medical Monthly*, April, 1900, reports the case of a woman whose past history was not stated and whose symptoms suggested appendicitis. She exhibited pain in the right iliac fossa and suffered from local pain and tenderness The possibility of appendicitis was kept in mind, but the diagnosis of an abscess of the abdominal wall was made She was treated expectantly with poultices and the sequel proved that the abscess was limited to the abdominal wall

Hiller[4] mentions the case of a woman, aged 23, with a tuberculous family history, who complained of occasional pain in the region of the gall bladder for three and a half years For the past two months the pain had been more severe and there had been an intermittent sense of pressure in the gall-bladder region lasting for a day at a time During this period of pain the patient had also noticed a tumor in that region which had gradually grown larger On examination a smooth, somewhat movable, easily palpable tumor, the size of a goose egg, was felt in the gall-bladder region, two fingers' breadth below the costal margin, which seemed to have a thin pedicle leading up under the costal margin and which did not seem to be adherent to the abdominal walls Operation was done for cholecystitis, but an abscess was found involving the right rectus muscle and infiltrating the adjacent muscles which discharged a thick, greenish pus containing caseous masses and in whose wall there were numerous tubercles No connection between the abscess and the peritoneum or ribs could be found

Allison[5] reports a case of tuberculous abscess of the abdominal wall simulating malignant disease of the transverse colon in a colored girl, aged 16, with a tuberculous family history, who eight months before admission to the hospital noticed a tender spot in the abdomen about the navel, when she stooped over the washtub From that time on the abdomen began to increase in size and sharp pain from time to time shot through it On examination the patient was quite anemic There was a tenderness about the navel and for a considerable distance on each side of and below it and a swelling which in its outline resembled an omental or colic malignant growth At the operation a tuberculous abscess was found between the rectus sheath and the peritoneum which extended from the navel downward and about four inches to each side of the median line Following a long convalescence the patient was discharged well

In conclusion, I express my thanks to Dr P R Bolton for permission to report the two cases from his service at the New York Hospital.

10 East Sixteenth Street.

3 Annals of Surgery June 1902 p 766
4 Beitr zur klin Chir 1899 xxv p 826
5 Medical News 1891 xxv p 217

SOME TROPICAL CUTANEOUS ULCERATIVE CONDITIONS *

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Under the term tropical ulcers so many types of cutaneous lesions may be included that it will be necessary at the outset to limit my remarks to certain forms of ulcerative process It seems wisest, therefore, to exclude such forms of disease as tuberculosis, syphilis, yaws and leprosy I shall confine myself to those described under the names "oriental sores," "tropical phagedena" and "veld sores," and dismiss those which have been less thoroughly discussed with a mere mention

In studying tropical ulcers we must bear in mind that, under whatever title the processes have been described, there is so great a confusion of opinion with regard to etiology and clinical course and so meager a knowledge of histology that satisfactory classification is well-nigh impossible This I have endeavored to take into consideration, and have chosen from among the bibliographic materials at my disposal those in which the descriptions are most uniform

ORIENTAL SORE

Since the first mention of this condition by Russell in 1756, many other men have written of it, and considerable literature has accumulated on the subject Some of this material is valuable, much is not First observed in Aleppo, from which city it took the name "Aleppo boil," it has since been studied in Morocco, Algiers Tunis, Tripoli, Egypt, Crete, Cyprus, Asia Minor, Syria, Mesopotamia, Persia, the Caucasus, Turkestan, Afghanistan, Beluchistan, and India In many of these districts it has acquired different names, usually that of the place at which it is most frequently seen Thus it has been called the "Aleppo boil," "Delhi sore," "Biskra button," "Sahara chancre," "Afghan plague," "Tashkent ulcer," and so on It has also taken other names, some descriptive of the lesions, others referring to their duration while still others, such as the term tropical or oriental sores, are purely general The latter, because of our present incomplete knowledge of the causation, are most appropriate

Following Wright's definition, the disease consists of single or multiple focal lesions of the skin, characterized by the formation of elevated, indurated areas which ulcerate and eventually cicatrize It is infectious and autoinoculable Histologically such lesions are characterized by cellular infiltration of the corium and subcutaneous tissue, together with hypertrophy, atrophy and disappearance of the corium

In 1885 Cunningham observed in the lesions certain bodies which had ameba-like characters and which were spore-forming To these bodies Firth, in confirming Cunningham's observations applied the name *Sporozoa furunculosa* Riehl however believed that these appearances were due to cellular degeneration

The bodies described by Wright in the lesion taken from the face of an Armenian girl were generally round

* Read before the Manila Medical Society December 19[illegible]

sharply outlined and from 2 to 4 mm in diameter A large part of their peripheral portions was composed of stainable substance, while the central part was unstained In each body, beside the larger peripheral stained mass, was a smaller one which stained more deeply The larger mass was from ¼ to 1/3 the size of the whole body, was of variable shape, but always formed a part of the rounded periphery Wright believes that these bodies are organisms, and has given them the name *Helcosoma tropica* James and others have also described such structures in oriental sores, and have identified them with the Leishman body which was first studied in cases of kala-azar, or tropical febrile splenomegaly

The disease is said to occur in dogs Both Wright and James were unable to infect rabbits with fresh material, and James thinks that the so-called Delhi sores in dogs are of a different nature from those in human beings

It is a peculiar fact that the same organism should in one locality produce a general disease like kala-azar and at another a purely local lesion James thinks that in Annam, for instance, where kala-azar is so prevalent and so fatal, the organism is a more virulent one, while in the localities where the sores occur it is less virulent and does not cause a general infection. Manson believes that the presence of the camel in the latter places may explain the difference He supposes that the organism passes through that animal and is thereby attenuated, much in the same way as vaccine is supposed to be derived from variola

The question of the modes of infection has not as yet been completely elucidated The general belief is that a previous lesion must be present to afford ingress for the organism Such a lesion may be quite insignificant, as, for instance, the bite of a mosquito Infection may also occur on the ground of other affections, such as the lesion of acne It may be propagated by its own secretion, by scratching parts distant from the primary sore with infected fingers, by infected clothing or even, perhaps, infected baths

One attack, while it may confer immunity, does not always do so The immunity which develops may be permanent or very transient.

The clinical reports state that the period of incubation varies from a few days to a month In the inoculated form the time is from ten to twelve days Race, gender, age, constitution, occupation, general hygienic condition and food seem to play no rôle in determining the presence or absence of the disease. In children it usually does not appear until after the second or third year Foreigners are generally exempt from it during their first year of residence in an infected district. It is more common in cities than in country districts

The earliest visible sign of the disease is a small red spot which appears like a mosquito bite On this there appears later a small spot of lighter color which gradually increases After some time, months perhaps, a thin fluid is exuded, forming a yellowish crust which increases in thickness from below If this crust be removed a small, rounded ulcer is exposed which has a tendency to increase peripherally The healthy skin about the ulcer may be infected by the secretion, and a group of ulcers produced, which, if close together, tend to coalesce The borders of the ulcer are sharp and somewhat irregular The floor is covered with indolent granulations The surrounding tissue may or may not be indurated The seropurulent secretion varies in amount. In case the crusts are not removed they gradually become thicker and in time bear a close resemblance to syphilitic rupia The deeper tissues are not affected

Healing commences after several months and is accomplished during the course of several more. It leaves a scar which is often pigmented and sometimes contracted Occasionally the lesions do not ulcerate and disappear after some months

Unlike many other cutaneous ulcers, this disease is usually quite painless and produces no disturbance of general health Moreover, it may disappear completely during the course of intercurrent disease, such as influenza or typhoid In case it is complicated with or complicates syphilis, tuberculosis or scurvy, it tends to become phagedenic It may become the seat of secondary infection When complicated by lymphangitis, phlebitis, erysipelas, abscess or gangrene, it may result in death

The number of ulcers in a single individual varies from one to forty or more, and they may occur in any part of the body They are most commonly seen on the extensor surfaces of the extremities, next on the face and neck, and infrequently on the genitalia In children they are found most frequently on the face They never occur on the soles of the feet, palms of the hands, beard or scalp

In sections of a specific lesion, one notices first that the corium and papillæ are infiltrated with lymphoid and plasma cells and with other cells that have originated from endothelium Accompanying this infiltration, the epidermis atrophies and disappears In smears from such a lesion, bodies which are readily stained by eosin and methylene blue and which have the characteristics mentioned above are found They are present in large numbers and often occur in aggregations that seem to have an intracellular relation to a large cell Their morphology and structure is constant In sections similar bodies, which occupy and sometimes completely fill the large endothelial cells, are observed James describes such structures in smears and sections made from Delhi boils

Thus far this condition has not been found in the Philippine Islands, in spite of the fact that both Strong and I have sought diligently for it It was in the course of such a research that, in 1903 and 1904, I examined many prisoners in Bilibid prison. From a large series of patients studied, thirty of the most promising were chosen for making cultural and histologic examinations From the local lesions, cultures were made The lesion was then excised and prepared for sectioning by fixing in Zenker's fluid and imbedding in paraffin The lesions studied included papules, vesicles, pustules and ulcers, chiefly the latter In the smears of twenty of these, hyphea and spores of trichophytons or allied organisms were found In many of them were small diplococci resembling the gonococcus in form Staphylococci were of very frequent occurrence, but in none of them could I see any bodies which either in number or in constancy of form corresponded with those of Wright It is perfectly true that occasionally bodies somewhat resembling those of the English Indian observers were present, but under such conditions that I was forced to regard them as the result of cellular degeneration

Later, in 1905, Strong observed, in a case presenting a chronic ulcer, bodies that in some respects resembled those described by Leishman and others But this resemblance was superficial and was due to the fact that the parasite, which Strong considers a torula, was an

intracellular one, which when stained showed certain forms similar to those pictured by the English observers

Still later, in 1905, I collected some tissue from superficial ulcers observed in St Paul's Hospital, and diligently searched them for evidence of the bodies of Leishman and Wright. One of these lesions somewhat resembled tropical phagedena while another was rather like an Oriental sore in that it apparently did not originate on the surface and was not tender or painful The lesion in this was a papular one covered with a macroscopically intact cuticle, but sections showed that the skin had undergone well-marked changes The corium was infiltrated with round and polymorphous cells, the former predominating There was also an hypertrophy of the epithelium, most marked at the edges of the papule In the corium there were areas of localized degeneration The subcutaneous tissue was infiltrated with round cells and leucocytes Giant cells were plentiful. No bacteria could be demonstrated in the tissue, but there were in sections from some regions bodies that resembled those of Leishman In one section five such bodies could be seen within an endothelial cell of a small blood vessel In other places agglomerations resembling zooglear masses were present By the use of a powerful mordanting stain, still other bodies were made visible These resembled the bodies described by Strong as torulæ They were chiefly present within phagocytic cells By the same method similar bodies were demonstrated in the nuclei of phagocytic cells, but not in the giant cells

Except for the intense resistance to stains, these bodies might be compared with those of Wright The conclusion which seems most logical is that they are the result of staining degenerated fragments This conclusion gains support from a comparison of these figures with the drawings illustrating Maximow's work on connective tissue formation as it results from inflammation It is possible, however, that they are of true parasitic nature, for they have much the same shape and size throughout the tissue, and they often show a more or less centrally placed chromatic material

Finding that the patient presenting these lesions did not improve either under iodids or mercury, he was ordered copper sulphate in small doses (gr ¼) Under this treatment he improved markedly This therapeutic result certainly speaks in favor of a blastomycetic origin

VELD SORES

The discovery of the veld sore was one of the results of the unpleasantness between Boer and Briton in South Africa Whether it is an actual pathologic entity and confined to the portion of the world where it was first observed can not be stated yet with perfect confidence since there is little unanimity among the authors regarding its etiology, distribution and general course Harman, whose work on the subject is voluminous and painstaking and the only authoritative one we have, considers the disease to be a particular one which has little, if anything, in common with other tropical cutaneous disorders Harman based his report on some thousand cases, from which he made eight cultures and from two of which he obtained tissue for histologic examination

The sore as usually seen appears as an extremely superficial ulcer, edged by a fringe of exfoliated epithelial tissue and an areola of inflammatory redness It commences as a small blister, the contents of which may be thin and watery or rather viscous The organism is present in the contents of these vesicles After the rupture of the vesicle the ulcer is exposed It is not readily amenable to treatment and runs a very chronic course The lesions occur chiefly in the extensor surfaces of the upper extremities from elbow to digit and at corresponding places on the lower limbs It is most frequent on the backs of the hands and wrists

Of 7,067 men examined, 19 35 per cent. had suffered or were suffering from the disease Whites alone, Boers and British, were affected In uncomplicated cases there were no constitutional symptoms

The organism resembles *Staphylococcus pyogenes aureus* in morphologic appearance and in cultures It acts on the tissues like an attenuated *Staphylococcus aureus,* but it produces a distinctive lesion in which it has a tendency to appear as a diplococcus It is a luxuriant grower on the usual media and has a greater resistance to destruction than its prototype It is called *M vesicans* With it Harman was able to infect himself and to produce the characteristic lesion and afterward to recover the organism in pure culture

The histologic picture presented is simply that of an acute inflammatory process characterized by leucocytic infiltration with destruction of the dermis

Lesions of the same general type as the veld sores are not of uncommon occurrence in Manila I suffered from a series of such sores, and in smears from their contents could find nothing but a diplococcoid organism that had somewhat the appearance of pairs of rapidly growing pyogenic cocci

These lesions originate at parts of the body which are *subjected to trauma,* as, for instance, the inner sides of the thighs in horsemen, and appear first as painful red points In the course of several days the tissues beneath these points become firm and the tenderness increases After four days or more the pain is intense The contents of these nodules is a yellowish green, rather soft, but not fluid mass of necrotic tissue

I find that, in my own cases, they healed most readily if dressed with alcohol or hot bichlorid solution If incised, they tend to leave pigmented (brownish) scars

TROPICAL PHAGEDENA

Jeanselme points out that under the term "tropical phagedena" are included all sorts of tropical ulcerations whose nature is not understood In a general way the process may be described as one in which the ulceration is rapidly progressive and in which the lesion is covered with a diphtheroid membrane

While it is most common in the Indo-Chinese peninsula, it has nevertheless been observed in many other tropical countries both in the old and in the new world It is more common in low, humid, hot districts Drs Strong, McDill, Dudley and I have observed similar cases in Manila

The apparent origin of the ulceration is in small abrasions of the skin lesions that ordinarily would be thought of no consequence Bites of insects grass cuts, scratches of any sort, therefore, may predispose to the disease

The first thing to be noticed in a typical case according to the French writers, is a blister with serosanguinous contents This ruptures and the base of the lesion becomes covered with a grayish false membrane The secretion of the ulcers arising in this way is brownish or bloody and has a fetid odor The gangrenous process extends rapidly and in [illegible] fever and weakness are present

The extensions may [illegible] in the latter case in[illegible]

sheaths, muscles bones and joints The result may be septicopyemia or fatal hemorrhage Such cases are examples of the grave form of the disease, and are the sort which McDill, Dudley and I observed Our case occurred on the basis of gangrene ensuing in a case of Raynaud's disease

It is in the less severe forms that the diagnosis has been confused, and, in order to avoid confusion, Jeanselme suggests that the term tropical phagedena be confined to ulcerations which show rapid extension and a diphtheroid membrane Bearing such a definition in mind, he says that there are only certain cases of syphilis that may be confusing, and the potassium iodid test will eliminate these

Dantec and Vincent have both described organisms in the lesions, but were unable to cultivate them Strong was able to isolate a staphylococcus and a proteus-like bacillus, the latter was, however, non-pathogenic In the case mentioned above only the golden staphylococcus was found

The histologic features are similar to those observed in diphtheritic infections The surface of the lesion is covered with a diphtheroid membrane composed of fibrin and cellular remnants The deeper layer shows round cells and leucocytic infiltration and edematous distension and separation of the cellular elements In Strong's case there was a considerable perithelial proliferation, which was most marked about the veins The process is, then no more than an acute fibrinopurulent inflammation of the skin, which may in severe cases affect other adjacent tissues The peculiarity is that it is autoinoculable and may be transmitted from man to man When these facts are borne in mind its similarity to hospital gangrene is evident

McDill and Wherry have reported cases of a form of severe hand infection from which Wherry isolated an organism identical with, or closely allied to, the bacillus of Koch and Weeks Such cases might also be included under the title of tropical phagedena, and, in view of the fact that infection is so readily accomplished, and that the cases of acute contagious conjunctivitis caused by this organism are not uncommon, it may be an important etiologic agent in this condition

When we consider the common clinical features of these various sorts of lesions, and the varying descriptions that have been given of them, together with the varying bacteriologic reports on their contents, it seems extremly probable that few of them are entities from their incipiency, and it would seem best for the present, leaving aside the specific lesions of syphilis, tuberculosis, leprosy and perhaps yaws, to confine all in the one group of ulcerative dermatites

My own experience has been that the majority of these cases are the result of a primary trichophyton infection ("dhobie itch") on which, in consequence of continued irritation in one way or another, a secondary infection has been engrafted A small number of lesions is caused by one or another organism, the commonest being the golden staphylococcus and an uncommon one the Koch-Weeks bacillus A few cases are of blastomycetic origin

The type of lesion produced by a given organism is often quite as dependent on the individual infected as on the organism itself

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The Meat Inspection Law—While this law has been looked on as a sacrifice of the gigantic business enterprises subject to its operation, its wisdom must speedily become plain to everybody—*New York Medical Journal.*

Clinical Notes

THE USE OF PLASTER ABOUT THE HAND

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The treatment of fractures of the hand and fingers, as a rule, has been considered of rather minor importance, because of the relatively more serious fractures which have to be dealt with Yet to the patient with a broken hand there is little to interest him in fractures, except that which concerns the particular lesion from which he is suffering

Attention to details in the treatment of these fractures can not be overestimated, and is just as essential to good results as in the case of more important breaks The diagnosis is usually easy, but the difficulty arises when one comes to apply a firm and compact dressing Simple as it may seem, this work is often accomplished in a slipshod manner because of its very simplicity The usual splints of wood, cardboard, etc, are either too cumbersome or do not hold the parts as firmly as they should, and especially devised apparatus is always at a

Fig 1—Showing plaster splint applied to the thumb

discount because of the inconvenience and loss of time in obtaining it.

One has but to inspect the normal hand to see how difficult it is to pad a flat splint so that it may conform to the various curves and not distort the member to which applied and at the same time give no discomfort to the patient

Plain gauze, the best quality of dental plaster, zinc oxid adhesive plaster and roller bandages will, as a rule, meet all emergencies far better than any of the splints now in use. Such materials are of most decided use when applied to compound fractures of the thumb and fingers

APPLIED TO A PHALANX

Figure 1 shows a plaster splint applied to the thumb Such a splint encircles more than one-half of the wrist, its edges then converge across the palm of the hand toward the base of the injured digit to form a groove in which the thumb lies securely bound down by adhesive plaster The method of applying the dressing is as

follows A piece of plain gauze is folded till it is about 14 ply and then cut to fit the parts according to the location of the fracture It should then be thoroughly soaked in cream of plaster, wrung out and dry plaster rubbed into the meshes followed by enough water to moisten it, when it may be rapidly applied with a bandage and held in the position desired for the correction of the deformity, till the plaster begins to set. It may then be removed from the hand and allowed to become thoroughly dry while resting on a radiator or in the sun The splint should in all cases include a little more than half the wrist and should immobilize the metacarpal bone as well as the phalanx itself It may be allowed to become thoroughly hard and firm either on or off the hand after it has dried sufficiently to hold its form When the fracture is compound the splint is made to leave the wound exposed, thus allowing for daily dressing without disturbing the parts Should the wound be in the palmar aspect the splint should be applied to the dorsum of the hand (Fig 2) and vice versa Wherever the splint is exposed to contact with discharges it may be covered with a few coats of shellac varnish or protected by gutta-percha tissue Such a dressing may be made to immobilize any or all of the fingers by varying the pattern while cutting the gauze

This form of splint is neat, compact, comfortable, and can be made to hold the parts absolutely secure It allows for daily dressing and inspection without in the least disturbing the alignment of the bones It can be applied quickly and the materials of which it is made are inexpensive, easily obtainable or kept in stock if one wishes It is equally effective when applied to either palmar or dorsal aspects and requires less subsequent adjustment than do other splints, because it fits, and swelling of the parts does not disturb the alignment nor necessitate removal of the dressing, as is sometimes the case when a cast is used Being made to conform to the peculiarities of the individual case pressure and counter-pressure are not obtained by padding but are a part of the splint itself The tendency toward rotary displacement is more easily avoided by this splint as it takes hold of the finger, as it were, instead of simply being bound on

IN FRACTURES OF THE METACARPAL BONES

Fracture of the metacarpal bones is usually treated by placing a 3-inch roller bandage in the fist, securing it as described by Scudder in his text book on "fractures" If the bandage be previously soaked in plaster, however, it will be found that less subsequent adjustment is necessary, because of the solid support given after the plaster has dried Should a fracture of a metacarpal bone be compound anteriorly or accompanied by wounds on the palmar aspect of the hand a splint such as shown in Figure 3 may be employed This splint covers the back of the hand and extends along the back of the finger corresponding to the broken metacarpal The knuckles adjoining the fracture are depressed by the surgeon's thumbs while his fingers make counter-pressure in the palm, thus raising the injured knuckle while the plaster is setting After the splint has become thoroughly dry it is secured to the hand by adhesive plaster, the base of the finger being drawn tightly up against the splint This will usually be found to have raised the knuckle sufficiently, though in loose jointed patients it may be necessary to place in the palm of the hand a small splint so formed as to raise the injured knuckle further into the concavity of the dorsal splint

Should extension and counter-extension be desired it may be obtained by projecting the splint 3 or 4 inches beyond the end of the finger, as shown in Figure 4

A hole is cut in the end of the splint and a piece of rubber tubing drawn through it, one of the loose ends being knotted The finger is then secured to the rubber in the usual way by a loop of adhesive plaster By this method one is able to increase the tension as desired by pulling the unknotted end, slipping being prevented by engagement with the knot on the end

Fig 2.—Showing splint applied to the dorsum of the hand.

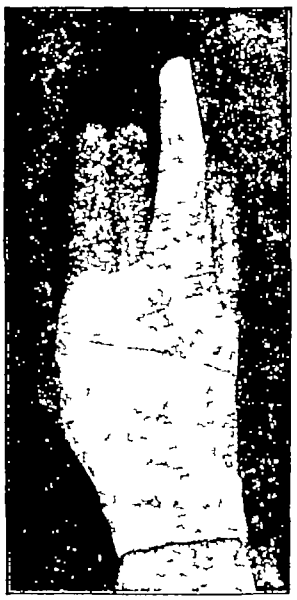

Fig 3.—Showing splint covering the back of the hand and extending along the back of the finger corresponding to the broken metacarpal bone.

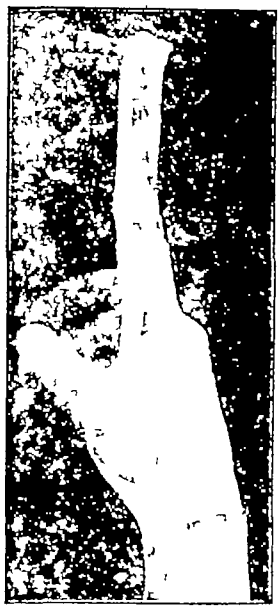

Fig 4.—Showing splint projecting beyond edge of the finger to permit of extension and counter extension

to the hole Such a simple method of extension can also be applied to a wooden splint When plaster is used a number of hours should elapse before the splint is subjected to the strain and it should be made heavier than when extension is not needed A very simple method of obtaining extension which will usually suffice in fracture of the metacarpals is by flexing the terminal and second phalanges over a palmar splint, maintaining traction while the plaster is hardening If the two flexed phalanges are then firmly secured and the rest of the splint drawn into place, extension and counter-extension will be all that is usually required

Superfluous plaster may be removed from the skin by washing with sugar or molasses Salt may be added to hasten the setting of the plaster, when this is desirable too much salt, however, will render the plaster brittle

THE PREVALENCE OF INTESTINAL PARASITES IN KIANG SU PROVINCE, CHINA

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Although it is commonly known that intestinal parasites are very prevalent in China, but little definite statistical work has been done, and so far as can be ascertained none in this province of Kiang Su China, considered medically, is rather an indefinite term with its great extent of territory and its hundreds of millions of people The eighteen provinces vary in many important essentials as 1 Climate, from the arctic cold of the northern to the tropical heat of the southern 2 Elevation, from the plains and level provinces to the mountainous 3 Density of population, from 30 to a square mile to 600 4 Amount of rainfall Therefore, it is quite probable that the prevalence of intestinal parasites in one province will be quite different from that in another

The present series of examinations of stools of Chinese was made at the laboratory of St Luke's Hospital, Shanghai through the kindness of Dr W H Jefferys The stools of all the patients in the hospital were examined without regard to symptoms presented, and, as they were of the lower class, the majority of the Chinese in this province probably show the same percentage and kind of infection

Kiang Su province has an area of 36,000 square miles, with a population of 25,000,000, or 568 to the square mile, with one exception the most densely populated province in China It consists of low-lying land extremely well watered, with rivers, including the great Yang Tse, lakes and the grand canal The climate is hot in summer, cool in the fall and an occasional light snow in the winter There are many cases of malaria and filariasis It resembles many of the provinces near it but further inland the country becomes more mountainous

With the above conditions the absence of sewerage systems, and the unclean habits of the people one would expect to find many cases of intestinal parasites as well as of other diseases caused by unhygienic surroundings The practice of spreading night soil over vegetables, strawberries, etc is perhaps one of the most prolific sources of infection Water probably plays a less important rôle, as the natives rarely drink anything but hot tea or hot water The Chinese believe that cold water is unwholesome indicating that the Chinaman has learned through experience what the doctor has learned through science In the large foreign settlement cities as Shanghai, the local boards of health have spent considerable effort in instructing the Chinese in simple hygienic measures

In all, during the months of October and November, 1906, 50 stools were examined It was the original intention to secure one or two hundred, but even the fifty were obtained with some difficulty, as the Chinese are rather loath to contribute to such a little understood process as fecal examination The patients in St Luke's Hospital are nearly all adult males, with ailments or injuries from fractured limbs to beriberi The stools were examined in the usual way, all with the high power Following are the results in tabulated form

TABLE 1

Percentage of infection	No of stools	Per cent
Examined	50	
Showing infection with one or more intestinal parasites	30	60
Showing infection with *Ascaris lumbricoides*	26	52
Showing infection with *Trichocephalus dispar*	9	18
Showing infection with *Uncinaria duodenalis*	2	4
Showing infection with *Oxyuris vermicularis*	1	2

TABLE 2

Cases of Double Infection	No of stools
Showing double infection	8
Showing infection with *Ascaris* and *Trichocephalus*	5
Showing infection with *Ascaris* and *Oxyuris*	1
Showing infection with *Ascaris* and *Uncinaria*	1
Showing infection with *Uncinaria* and *Trichocephalus*	1

TABLE 3

Relative Frequency of Parasites Found	No of parasites	Per cent.
Ascaris lumbricoides among the infected stools	26	86+
Trichocephalus dispar among the infected stools	9	29+
Uncinaria duodenalis among the infected stools	2	6+
Oxyuris vermicularis among the infected stools	1	3+

The sum of the percentages in Table 3 comes to over 100, but it must be remembered that many of the cases were double infections

The above tables would indicate that 60 per cent of the population of Kiang Su province are infected with intestinal parasites, and this figure is probably under rather than over the true estimate, as it is possible that some stools with very few ova were overlooked Some of the stools, for instance, would show only one ovum of the *Ascaris lumbricoides* in a slide, while others would show large numbers of ova to every field Then, too, it may be possible that if only one or two worms were present the discharge of ova might be intermittent, and thus the presence of parasites be overlooked with only one examination *Ascaris* seems to be by far the most common parasite, with the *Trichocephalus* next The ova of the *Ascaris lumbricoides* varied greatly in size, shape and color, a number of the long oval shape that have been described[1] as probably belonging to a new species of *Ascaris* were seen

Two cases of infection with *Uncinaria duodenalis* are noted, or 4 per cent. of the stools examined Both showed but a few ova, two or three to a slide, and after treatment with thymol search for the parasites was made without success

One case of *Oxyuris vermicularis* was noted J Ch Huber[2] states that he has never discovered the ova of this parasite in fecal material taken from the rectum, and that microscopic examination of the dejecta is of little diagnostic value O Leichtenstern[2] and Lutz[2] have also

1 O T Logan The China Med Missionary Jour September 1906
2. Twentieth Century Pract of Med., viii 1896 Ed.

failed to discover the ova of *Oxyuris* in fecal examination On the other hand, v Jackson says he has almost always found them in the feces

No ova of the tapeworms were found The Chinese eat but very little beef, and that well cooked, explaining the absence of *Tenia saginata* A great deal of pork is eaten, but thoroughly cooked, so *Tenia solium* also is apparently uncommon

Of the unicellular intestinal parasites but one was noted, the *Trichomonas intestinalis* Some of the stools, however, were examined after standing for some time, so it is possible some were overlooked in this way Dysentery and abscess of the liver are not uncommon here, during 1905[3] there were three deaths from abscess of the liver among the foreign resident population of about 12,000 No statistics of its prevalence among the Chinese are available Neither the *Entamœba coli* nor the *Entamœba histolytica* was found in any of the fifty stools examined

A NEW EYE SPECULUM

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This improved eye speculum is made entirely of brass and is therefore, non magnetic. It is composed of only two parts, which are easily detached for cleansing It has neither spring, setscrew, hinge or ratchet It is very light, weighing less than three drams It is introduced easily without changing hands, locking itself automatically

It can be removed very quickly without the resistance of a spring to overcome, a setscrew to loosen or the fear that it may slip from the hand It takes but a moment to increase or to diminish the pressure on the lids It has the advantage of the original Mellinger's speculum in that the blades open parallel.

The blades are solid and conform to the curve of the lid margin The pressure on the sensitive lid, therefore, is equally distributed reducing the distress and reflex spasm to a minimum The under surfaces of the blades are concave to conform to the convexity of the eyeball, so that it is unnecessary

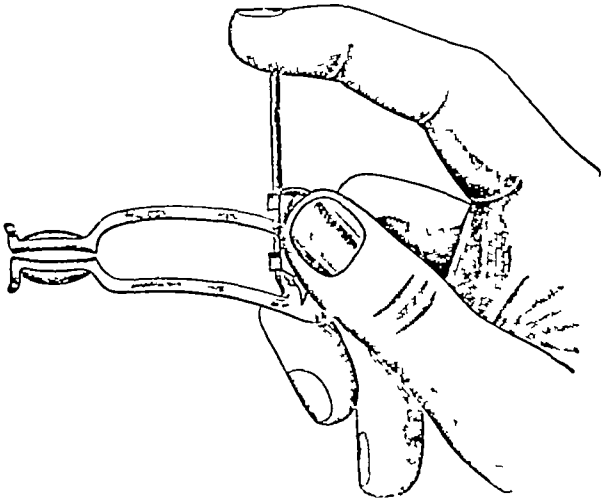

Fig 1 —Method of introducing the speculum.

for an assistant to hold the speculum at the most critical period of an operation

The advantage of the wire speculum is maintained by removing a piece from the outer part of the blades leaving just enough to turn the lashes upward and downward The heels of the blades are beveled, that the speculum may be removed quickly without danger and without touching the lids to release them The sliding bar lies on the face and out of the way

In originating this speculum I was prompted by the desire to get a non magnetic speculum, but after using it for three years in all sorts of operations on the eyeball I feel that it has other advantages that will appeal to the progressive worker in opthalmology

After the technic of using the speculum is fully understood very little practice is necessary to operate it successfully A reference to the illustrations will show the method of handling the instrument.

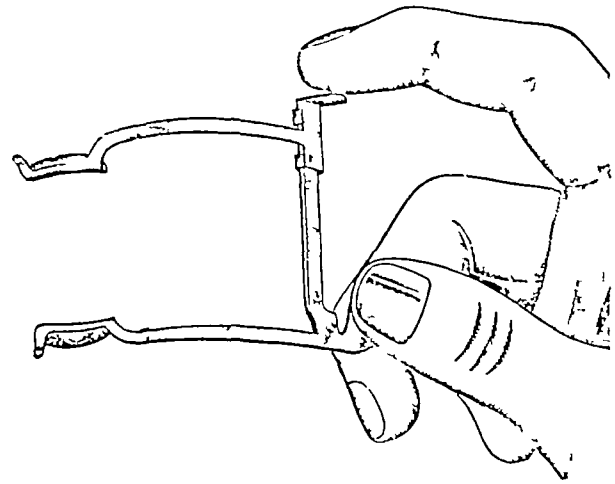

Fig 2 —Method of removing the speculum

A CONTRIBUTION TO CHEILOPLASTY

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Of the many deformities of the lower lip none is more distressing or more difficult to remedy than ectropion or eversion of the lower lip following extensive burns of the lower part of face and neck Burns involving the deeper layers of the skin about the neck are almost always followed by this deformity, together with an extensive amount of scar tissue This often extends up to the cheeks, but more often involves the skin about the inferior maxillary region and the anterior part of neck The firm adherence of the scar tissue to the muscles and structures immediately beneath it renders the cheiloplastic operations usually described in text-books difficult, uncertain or impossible

The operation usually recommended for this condition consists in making a V-shaped incision corresponding to the margins of the inverted lip, raising the lip and closure of the wound thus made in the form of the letter Y This operation presupposes some mobility of the skin and scar tissue on either side of the everted lip and, while this mobility may sometimes exist, rendering this operation applicable, in most of the cases the fibrous tissue is so dense as to render the operation useless

Elevation of the everted lip, after the V-shaped incision, combined with Thiersch skin grafts for the denuded area, is probably the most applicable of all methods This method, however, has the following deficiencies, viz.

1 The difficulty of maintaining the reflected lip in its normal position until the union of the grafts

2 Inability to overcorrect the deformity, which is so

[3] Ann Rep Health Dept ShangLai China 1905

necessary to success in all plastic operations, in order to allow for subsequent contraction

3 Difficulty in maintaining skin-grafts in position

4 Infection of operative site by secretions from the mouth

The operation which I wish to describe overcomes at least the first three of these deficiencies

TECHNIC

An incision is made, oval in outline, corresponding to the muco-cutaneous margin of the everted lip and extending through the skin down to the superficial muscles The flap, consisting mostly of the mucous membrane of the everted lip, is dissected upward, care being taken that sufficient flap is secured to overcorrect the deformity Hemorrhage is moderately severe and is controlled by pressure forceps and hot sponges

The reflected flap or lip is now held in its normal, somewhat overcorrected position by what may be designated as the "skewer method" Beginning at the left side of the mouth, about one-quarter of an inch above and to the outer side of the angle, at a height corresponding to the upper border of the flap, a previously prepared short silver probe sharpened on one end is

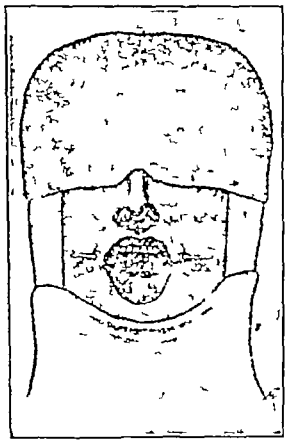

Figure 1

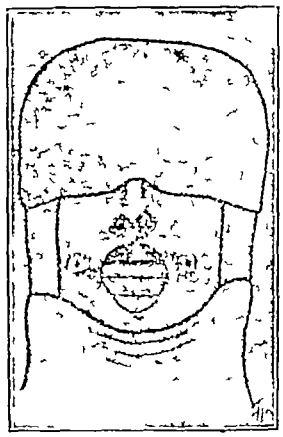

Figure 2

passed through the cheek toward the margin of the reflected lip, the point being passed submucously through the entire lip and piercing the right cheek at a point corresponding to its entrance on the left side (Fig 1)

The lip will now be found securely held in its desired position, giving the opening of the mouth a somewhat triangular outline The introduction of the sharpened probe in the manner described is easy

In the first case in which this operation was done a heavy silver wire was used in place of the probe, but on account of the flexibility of the wire some downward sagging of the lip resulted The probe should be heavy enough to prevent this After the probe is in place a small gauze pad is threaded on each end, and a perforated shot placed next to the gauze, and the excess of the probe then cut away The denuded surface is now completely covered by Thiersch skin-grafts, which are secured in place by a few stitches of either fine silk or catgut (Fig 2) If silk is used, it should be of the finest, which is best obtained by splitting No 1 silk and using a fine cambric needle Before introducing the silk sutures they should be smeared with sterile vaselin, which reduces the liability of displacement of the grafts

The dressing consists of salt solution and gutta-percha tissue changed daily, and after from three to five days the use of a saturated boric-acid solution instead of the salt solution

The prevention of contamination by mouth secretions is most difficult and is best overcome by frequent dressings I have used this method in two cases, both of which gave most gratifying results

CASE 1.—Boy, aged 4, entered the Lucas County Hospital Dec. 19, 1902, suffering from extensive burns about the lower part of the face, entire neck, chest and right forearm He was treated for several months, healing taking place after daily antiseptic dressings and skin grafting about the chest, neck and arm Cicatrization about the neck and lower part of the face resulted in ectropion of the lower lip Two unsuccessful operations were made to restore the lip by raising it and skin grafting

The third operation consisted in raising the lip and passing a heavy silver wire through the cheeks and lower lip, suspending the lip thereon, while the denuded area was covered by Thiersch grafts, it was dressed with salt solution and gutta percha tissue On account of the flexibility of the wire, some sagging of the lip occurred

The cosmetic result was good, the patient being under observation for several months, during which time the lip remained in good position

CASE 2.—Girl, aged 14, referred to me by Dr C F Douglass, Kalida, Ohio, entered the St Vincent's Hospital Aug 19, 1906 Patient, when 4 years old, was burned about the face

Figure 3

Figure 4

and neck Healing took place in about two months with the resulting deformity of lower lip shown in Figure 3 Two operations for the correction of the deformity were made by other surgeons about five years previously, consisting of a transverse incision under the chin and the reflection of the lip upward together with an extirpation of some of the everted mucous membrane. These procedures failed to correct the deformity The condition on entrance to the hospital consisted of a typical ectropion of the lower lip, backward movement of the head was somewhat limited on account of scar tissue about the neck and chin.

On Aug 20, 1906, a V shaped flap, consisting of the everted lip and skin, was dissected upward and the wound closed in form of the letter Y This operation did not correct the ectropion, but loosened the scar tissue about the neck and gave prominence to the chin, which before this operation had been lost.

On Sept. 11, 1906, the eversion of the lip was corrected by the "skewer method," in the manner already described

Some suppuration of the wound required daily dressings, the probe was removed on September 20 by cutting off the shot at one end and withdrawing the remaining part, the removal being painless The lip remained in place and the patient was discharged from the hospital on September 30, entire healing taking 16 days (Fig 4)

237 Michigan Street

New and Non-Official Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NON OFFICIAL REMEDIES." THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W A. PUCKNER, SECRETARY

(*Continued from page 697*)

(*A list of all accepted articles is published on advertising page 24, this issue*)

THYREOIDECTIN

CAPSULÆ ANTITHYROIDEÆ

Thyreoidectin consists of gelatin capsules each containing 0 33 Gm (5 grains) of a powder prepared from the blood of thyreoidectomized animals

The blood is derived from sheep goats or horses (chiefly sheep) from which the thyroid gland has been removed. The blood is rendered aseptic during the process of desiccation by the addition of chloroform and aromatics are added to the resultant powder as a flavor

The contents of the capsules consist of a coarse reddish brown powder resembling dried blood.

Actions and Uses—See Antithyroid Preparations

Dosage—One to two capsules three times a day, the amount being varied to suit the individual case

Prepared by Parke Davis & Co, Detroit Mich

TONIC HYPOPHOSPHITES

SYRUPUS HYPOPHOSPHITUM TONICUS

Each 30 Cc. (1 fluidounce) is said to contain Potassium hypophosphite 0 1 Gm (1½ grains) Iron hypophosphite 0 1 Gm (1½ grains) manganese hypophosphite, 0 005 Gm (1 grain) quinine hypophosphite 0 03 Gm. (½ grain), strychnine hypophosphite, 0 004 Gm (1/16 grain)

Dosage—4 to 8 Cc (1 to 2 fluidrams)

Prepared by Sharp & Dohme Baltimore Md.

TRYPSOGEN

Tablets, said to contain the enzyme of the islands of Langerhans with the tryptic and amylolytic ferments of the pancreas, 0 0006 Gm (1/100 grain) gold bromide and 0 0003 Gm (1/200 grain) arsenic bromide in each tablet

The sugar oxidizing amylolytic and tryptic ferments are said to be prepared from the tails of the pancreatic glands of young calves and lambs.

The tablets are of a light brown color, a faint odor and a sweetish taste.

The preparation should show active power of converting starch into sugar and should give the reactions for gold arsenic and bromine. Methods of testing for the sugar oxidizing ferment are not known.

Actions and Uses—Trypsogen has the amylolytic and tryptic power of pancreatin and is said to exert the sugar oxidizing action of the islands of Langerhans

It is claimed that it is a rational treatment for diabetes and glycosuria, supplying the ferment of the islands of Langerhans which is lacking in these cases It is also said to be useful in anemia, chlorosis, chorea and neurasthenia

Dosage—In glycosuric conditions 2 tablets after each meal gradually increased to the limit of tolerance or until 5 to 7 tablets are taken, then discontinue for two days and begin again with the smaller dose and increase as before In neurasthenic conditions 1 to 3 tablets immediately after each meal

Prepared by G W Carnrick Co New York. U S trademark.

TUMENOL-AMMONIUM

Tumenol-ammonium is the ammonium salt of tumenol sulphonic acid (see Tumenol)

Tumenol-ammonium is a dark oil with a faint tarry odor and acrid taste It is soluble in water in all proportions with a neutral reaction. It is also soluble in alcohol ether and glycerin.

Actions and Uses—See Tumenol

Dosage—Tumenol-ammonium is applied as a local dressing in the form of a 5 to 10 per cent aqueous solution, a 5 to 20 per cent tincture containing equal parts of ether, alcohol and water or glycerin, and as a 5 to 20 per cent ointment.

Manufactured by Farbwerke vorm Meister Lucius & Brueninc Hoechst a M Germany (Victor Koechl & Co New York) Not patented in U S

VALIDOL

Validol is the menthylester of valerianic acid, $C_{10}H_{19}O\,C_5H_9O$, with 30 per cent of free menthol

It is prepared by heating a mixture of 16 parts of menthol and 12 parts of valerylchloride on a water bath until hydrogen chloride ceases to be given off adding very dilute solution of sodium hydroxide shaking out the mixture with ether drying the ether solution with potassium carbonate distilling off the ether and rectifying the residual oily product by vacuum distillation finally dissolving 30 per cent. of free menthol in the pure ester so obtained.

Validol is a crystal-clear colorless liquid of the consistency of glycerin having a mild and pleasant odor distinct from either that of menthol or valerian and a refreshingly cool and very faintly bitter taste insoluble in water but readily soluble in alcohol ether chloroform and oils It is decomposed by alkalies. On warming with sodium hydroxide solution the odor of menthol manifests itself If then the alkaline solution is acidulated with diluted sulphuric acid the odor of valerianic acid is developed It is incompatible with alkaline media

Actions and Uses—Analeptic, antihysteric, carminative, stomachic, combining the activity of valerianic acid and of menthol It is devoid of the irritating acridity of the latter and is said to be well tolerated by the most sensitive stomach

It is recommended in hysteria, migraine, gastralgia, gastritis, vomiting of pregnancy, exhaustion, hypochondria, syncope and all reflex neuroses

Dosage—10 to 15 drops, on sugar, or in a little sweet wine

Manufactured by Ver Chininfabriken Zimmer & Co Frankfort a. M. Germany (C. Bischoff & Co New York)

VALIDOL CAMPHORATUM

CAMPHORATED VALIDOL

Camphorated Validol is a 10 per cent. solution of camphor in validol Camphorated Validol is a clear colorless liquid of the consistency of glycerin having an agreeable odor and refreshingly cool and faintly bitter taste It is insoluble in water but readily soluble in alcohol oils and other organic solvents It is incompatible with alkaline media.

Actions and Uses—Restorative, local analgesic, nonirritant and non-poisonous, well tolerated by the mucous membrane of the stomach It is recommended in serious cases of exhaustion, where the administration of camphor is indicated, in odontalgia, either by application to the pulp or inserted on cotton into the previously rinsed cavity

Dosage—10 to 15 drops on sugar or in wine

Manufactured by Ver Chininfabriken Zimmer & Co Frankfort a. M., Germany (C. Bischoff & Co New York)

(*To be continued*)

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SATURDAY, MARCH 2, 1907

THE SIGNIFICANCE OF DECREASED HYDROCHLORIC ACID IN GASTRIC CANCER.

Few facts in clinical chemistry have been more utilized and relied on in diagnosis than the decrease in acidity of the gastric juice in cancer of the stomach. The explanation of this fact has not been so satisfactory, however, for the degree of reduction in acidity has not been found to bear any constant ratio either to the extent of the growth or to its point of origin in the stomach. The coincidence of the location of the growth in the stomach with a decrease in the functional activity of that organ has naturally led to an association of the two facts, and emphasized the view that the decrease in acidity of the gastric juice in cancer of the stomach depends on some local effect of the tumor. This explanation, however, has never been satisfactory, for frequently a very local growth has been found associated with total absence of free hydrochloric acid, in spite of the fact that nearly all the gastric mucosa was uninvolved, and, so far as histologic examinations show, perfectly capable of performing its full function. Consequently we have attempted to satisfy ourselves with the idea that the local cancer has caused some obscure chemical change in the rest of the gastric mucosa, or has in some unexplainable way modified the secretory innervation. One writer, indeed, seeking for something tangible, has ventured the idea that products of the autolysis of the cancer neutralize the acid of the gastric juice, a very improbable hypothesis.

Anything new concerning the subject of the acidity of the gastric juice in cancer of the stomach is, therefore, highly welcome, particularly so when it bears evidence of being the outcome of exact study by improved scientific methods. This is emphatically the case with two papers recently published by Professor Benjamin Moore, of Liverpool, and his colleagues,[1] which deal with the acidity of the gastric juice of persons who do not have cancer of the stomach, as compared with the usual findings in gastric carcinoma. The very important fact is brought out that the decreased acidity of gastric cancer does not depend on the fact that the cancer is located in the stomach, for an equally striking reduction in acidity occurs in patients who have malignant growths located in any and all parts of the body. Corroborative results have been obtained by F. W. M. Palmer.[2] It was also found that patients with noncancerous diseases usually show no such striking reduction in gastric acidity as cancer patients, although not infrequently an extremely low quantity of free hydrochloric acid is observed in patients with no evidence of gastric disturbance of any kind. Evidently, then, the secretion of hydrochloric acid by the stomach is extremely susceptible to the influence of any depression in the general health of the body, and cancer of the stomach exercises no specific influence on this secretion. On the whole, however, the reduction in acid secreting power is much more marked in cancer than in other conditions, free acid being entirely absent in about two-thirds of all cases studied by the most approved methods, and much reduced in the remaining one-third.

As an explanation of the inability of the stomach to secrete hydrochloric acid in cancer, it is suggested that in this condition the blood plasma contains less free hydrogen ions than normal for the gastric cells to secrete into the stomach cavity in the form of free acid. In support of this hypothesis is reported the observation that in cancer the alkalinity of the inorganic constituents of the plasma is increased (it is impossible to determine directly the concentration of hydrogen ions in the plasma because it is too small to be measured). Whether or not this explanation is correct there still remains the important new observation of the general influence of cancerous growths, wherever located, on gastric secretion of hydrochloric acid, and this observation must have an important influence on clinical diagnosis by means of analysis of the gastric juice.

1 Proc. Royal Society 1907 lxxvi 138. Biochem. Jour. 1906 i 274.

DIMITRI IVANOVITCH MENDELEEFF

By the recent death of Dimitri Ivanovitch Mendeléeff the world of science loses one of the most striking figures that has appeared within our times, while Russia loses a character which constituted one of the bright spots in the records of that country. It may properly be said that Mendeléeff was one of Russia's greatest contributions to the world's progress, and that by the chemists of foreign nations he will always be remembered in connection with that country, as Berzelius with Sweden, Liebig with Germany, or Dumas with France. Mendeléeff obtained his education almost entirely in Russia, and so he may be credited wholly to her. He was born of educated parents, at the time of his birth (1834) his father was director of the college at Tobolsk in Siberia. His mother was a woman of remarkable character, who, when her husband became blind, established and successfully managed a glass works which supported her large family. After pursuing his studies in various parts of Russia, Mendeléeff was made a privat-docent in the University of St. Petersburg when twenty-two years of age. From the beginning of his career he interested himself chiefly with problems related to the fundamental

2 Biochem. Jour. 1906 i 398.

principles of physical chemistry Although he accomplished much research along these lines, his principal contributions are the result of his great powers of generalization, which permitted him to grasp the essential principles underlying heterogeneous observations coming from scattered sources The greatest of his generalizations, and the one on which his fame will ever rest secure, is embodied in the "Law of the Periodicity of the Elements," which he published in his classic "Principles of Chemistry" in 1869

The essential features of this law, which Mendeléeff developed from the facts that had been accumulated up to the time of its publication, are briefly as follows If all the elements are arranged in the order of their atomic weights it will be found that the properties of the elements thus arranged show a marked periodicity Elements which are similar to one another in chemical properties fall together in such a table, for either their atomic weights are nearly the same (e g, platinum, iridium, osmium), or they show a regular increase (e g, potassium, rubidium, cesium) Also, the arrangement of the elements, or groups of elements, in the order of their atomic weights, corresponds to their valences The magnitude of the atomic weight, therefore, determines the character of an element, just as the magnitude of the molecule determines the character of the compound body

When the known elements were thus grouped according to the atomic weights assigned to them at the date of this first publication of the law it was noted that there were a few of the elements which did not come exactly where they should if the law were a general law, and, also, that there were a number of gaps in the table So clear was Mendeléeff as to the universal applicability of the law of periodicity that he ventured to predict that those elements which were out of place in his table would be found to have had incorrect atomic weights assigned them, and that a restudy of their atomic weights would bring them into place on the table As for the gaps in the table, these depended on elements yet undiscovered, but which, he predicted, would yet be found, and by application of the law of periodicity he foretold the properties of the missing elements and their probable sources The immediate result of this publication was a greatly stimulated research in two directions, one the restudy of the atomic weights of the known elements, the other a search for new elements, which search now became a well-directed hunt guided by the foretold knowledge of the properties of the new elements, instead of a blind search after unknown things In both cases Mendeléeff's predictions were brilliantly fulfilled, and within a very short space of time, so that he was permitted to enjoy his triumph for many years Revision of atomic weights showed that the correction always brought the elements into the exact places in the series to which their properties assigned them according to the periodic law And several new elements have been discovered with the properties and atomic weights foretold by Mendeléeff, which fill in many of the gaps in his table The law of periodicity is, then, a fundamental one, on which researches can be based, not only in studying new or rare elements, but also in investigating the problems of the constitution of matter

But Mendeléeff's claim to greatness does not rest on this single discovery Not only did he write important papers on such subjects as the specific volumes of liquids, the theory of solution, elasticity of gases, and allied subjects, but he had a profound influence on the study of chemistry in Russia A large proportion of the teachers of chemistry of that country have received their training under him and his pupils, and his early treatise on organic chemistry, as well as his more famous "Principles of Chemistry," had wide use and great influence Furthermore, he took an active interest in the development of the industrial resources of Russia, especially in connection with the petroleum industry It is interesting in connection with current topics to learn that over thirty years ago Mendeléeff was occupied in vigorously attacking a monopoly that controlled the oil fields at Baku In this attack he was successful, and in connection with the development of the oil fields he made a thorough study of the petroleum industry, including a visit to the Pennsylvania fields

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GORGAS A MEMBER OF THE ISTHMIAN CANAL COMMISSION

The appointment of Col W C Gorgas as a member of the Isthmian Canal Commission is of more than ordinary importance to the country and to the medical profession At the time of the original organization of the Commission, in 1904, it will be remembered that the American Medical Association, through its Committee on Medical Legislation, made strong representations to the President, urging that Dr Gorgas be made a member of the Commission

The chief grounds on which the appointment was urged were 1, that the sanitary problems at the Isthmus were strictly fundamental to the great enterprise, 2, that the officer placed in charge of a department of such paramount responsibility ought to have coordinate, if not autonomous, power in the executive body—in no event being made subordinate to those ignorant of the technical questions involved, and, 3, that the medical profession as such, by virtue of its intellectual, social political and commercial status alone, was entitled to representation on governmental bodies vested with executive function and dealing in a large way with sanitary problems While the request was denied, Colonel Gorgas was designated as Chief Sanitary Officer under an executive commission, the controlling spirits of which had no adequate conception of modern sanitation As a consequence, such men were inimical to many of the most sa-

lient features of the necessary campaign against the perennially endemic diseases prevailing on the Isthmus The status of Colonel Gorgas and of the sanitary department under this arrangement was shown, in the report of Dr Reed, as chairman of the Committee on Medical Legislation, after a visit to the Isthmus in February, 1905, to be one of subordination successively "
to the Governor of the Zone, to the Chief Disbursing Officer, to the chief of the Bureau of Material and Supplies, to Mr Grunsky (special committee on sanitation), to the Commission, to the Secretary of War, to the President, subordinated, in fact, in the seventh degree from the original source of authority

One can not but be impressed," continued the report, "with the anomalous condition by which a man of Colonel Gorgas' distinction, the foremost authority in the world in solving the peculiar problems connected with sanitation on the Isthmus, being made a mere instrument in the hands of a whole series of men who confessedly are ignorant of the very questions with which he is the most familiar"

The publication of this report was speedily followed by material improvement in the status of the Sanitary Department on the Isthmus It was not, however, until the President visited the Zone and personally investigated conditions, apparently, that he became convinced of the wisdom embraced in the recommendations of the American Medical Association, made three years previously Immediately on his return, he announced his intention, which he has finally carried out, to appoint Colonel Gorgas as a member of the Commission

As before stated, this is a step of great importance to the medical profession and to the country It is a recognition of the principle that, in public station, the medical profession ought, of right, to be placed in executive control of its own science, it is a recognition of the capacity of physicians to serve in high administrative capacity, and it is a recognition of the right of the medical profession to distinguished consideration at the hands of the Chief Executive. The improved status of the Sanitary Department on the Isthmus is a further guarantee to the country that the great work of connecting the two oceans will be prosecuted with the least possible prospect of delay caused by epidemics such as defeated the French in both of their efforts to dig the canal

The appointment, in its personal aspects, is a just appreciation of the valuable services of Colonel Gorgas His long career in the army brought him in contact with yellow fever on the Rio Grande and elsewhere During the Spanish-American War he was identified with Reed, Carroll and Lazear in establishing the mosquito theory of yellow fever, and, placed in absolute control of Havana (through the intelligent action of Colonel Leonard Wood, himself formerly of the Medical Corps) he was the first man in the world to reduce the scientific accuracy of that theory to a positive demonstration His work on the Isthmus, in spite of the early embarrassments to which he was subjected, has been crowned with the highest success, showing the entire possibility of completing the great task to which the country stands committed If we have felt that this action of the President was tardy, that feeling is now effaced in recognition of the judgment and justice—to say nothing of the progressive views—that he has displayed in appointing Colonel Gorgas to membership on the Commission

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THE PREVALENCE OF GONORRHEAL INFECTION

Some weeks ago[1] we called attention to the series of papers dealing with venereal diseases, read at the Boston session of the Association, the remote effect of these diseases on married women, and the physician's duty to the public in connection with this question Shortly before Erb[2] of Heidelberg, in a valuable paper, gave the results of his own experience in the matter of gonorrheal infection and came to the conclusion that the figures usually cited as giving accurate data as to the prevalence of gonorrhea are erroneous, the error being on the side of over-estimation Erb had been collecting data bearing on the subject for some time, but his views were, perhaps, directly called forth by a paper of Blaschko, which contained figures purporting to show that every man who did not marry until the age of 30 had had gonorrhea at least twice Previous to Blaschko's paper the figures of Lesser, Ricord and Doctor were those most frequently cited, these authors giving the percentage of males who contracted gonorrhea as over 80 Erb's study, which had in view both the determination of the frequency of gonorrhea in the male and the subsequent effect on the wife, led him to place the figures lower than other observers and to view the whole matter in a more optimistic light He concluded that about 49 per cent of men had gonorrhea before marriage, most of them contracting it before the age of 25 He also argued that at least 45 per cent. of the infected men recover so that no traces of the disease are left, a view quite at variance with that held by some well-known genitourinary surgeons Erb also concludes that not more than 4 5 per cent of married women are seriously infected with gonorrhea by their husbands

Erb's figures have called out a reply from Blaschko and a paper relating especially to the infection of the wife, by Vörner[3] Blaschko objects to Erb's statistics on the ground that they are "retrospective" and based on the patients' statements rather than on the actual observation of facts, he also calls attention to a fact that Erb himself admits, viz that Erb's statistics refer to a particular class of patients and are not applicable to all classes The difficulty of getting patients to speak the

1 THE JOURNAL A. M. A., Dec. 22, 1906 p 2094
2. Münch med. Wochschr No 27, 1906
3 Münch. med. Wochschr., Jan. 29 1907

truth in such matters is very properly emphasized, and figures collected from various sources are cited to show that Erb's statistics are too low Vorner presents no actual figures, but also reaches the conclusion that Erb receives the statements of his patients with too much credulity

Every practitioner must appreciate the great difficulty of collecting data on a subject of this sort. Doubtless the variations in the different figures are partly due to this element It must be recognized, too, that figures vary greatly according to locality, those for the great cities being largest and those from the country being smallest Making allowance for all these sources of error, the percentages as they stand are appalling The amount of disease and misery caused by gonorrheal infection must be immense We can but repeat our remarks of two months ago and urge on every physician a personal interest in the matter, which must be fought by education rather than by legislation

CHRONIC APPENDICITIS WITHOUT DEFINITE ATTACKS

The history of most cases shows that the atypical forms become well known long after the typical ones are generally recognized This is true of appendicitis, in which disease the classical picture with acute onset, localized pain and tenderness over McBurney's point is now known to every physician, but certain chronic forms are less often recognized The fact that there are chronic cases in which there are no definite attacks and but few symptoms directly referable to the appendix has been recognized for some years Ewald spoke of this type of appendicitis as "appendicitis larvata," but the term has not come into general use There is little doubt that cases of this character are frequently overlooked and diagnosed as intestinal indigestion or dyspepsia. They do not belong to the class of cases which reach the surgeon early, and, as a rule, the surgeon is more expert at detecting the atypical varieties of appendicitis than is the general practitioner

The clinical picture presented by these patients has recently been summarized by Klemm [1] At first sight the patient gives the impression of one suffering from some chronic gastrointestinal disorder rather than from a localized condition The symptoms are mainly those of a catarrh of the large intestine, and many cases are so diagnosed The patient may have diarrhea or constipation, or the two conditions may alternate, there is often a feeling of fulness and discomfort after meals, some pain in the neighborhood of the right iliac fossa is rather common, and this may radiate to the epigastrium, the umbilicus, or the left side The pain is increased by long standing or even long sitting, is severe enough to make the patient restless and irritable, but is at first not wearing enough to lead him to consult a physician Stomach symptoms may occur in some patients, but are not so common as intestinal ones When present they take the form of anorexia or eructations occurring immediately after meals

Physical examination of these patients shows in many instances some tenderness over McBurney's point and at times a palpable appendix In some cases there is a visible swelling in the right flank from a gas-filled cecum, the so-called "air-cushion" symptom In occasional patients there is a slight daily rise of temperature above the normal and persisting for months The recognition of this type of appendicitis is important, as the condition is intractable under medical treatment, and is only to be permanently remedied by operation.

1 Mitt aus den Grenzgeb der Med. und Chir December 1906

RITUALISTIC SANITATION OF THE JEWS

In an interesting article in the *Saturday Evening Post* Dr Solomon Solis-Cohen, Philadelphia, points out in what manner and to what extent the sanitary regulations prescribed by the Jewish religious teachers have anticipated and are in accord with the best teachings of modern hygiene It has long been claimed that the Jews are less subject to many contagious diseases and have an average greater longevity than other peoples and their immunity is said to have been specially noticeable during the great epidemics that from time to time have ravaged Europe The aseptic methods of modern times are paralleled largely by the old Mosaic law which has been enlarged on by the rabbinical commentators Even the regulations for government inspection of meats recently adopted in the United States, Dr Cohen says, are less thorough and strict than those of the Jews Only in the matter of inspection of milk, fruits, cereals, eggs, etc, has modern science and legislation distinctly advanced beyond that of the rabbis and he questions whether or not there was the same necessity in their day We might also ask if there is the same necessity for the Jewish dietetic regulations in some climates, differing from that of the original seat of the Jewish race, certain parts of the world might be less habitable under the Mosaic dietetic rules Be this as it may, there can be no question that the effect of these regulations has been salutary and that ritualistic cleanliness is the secret of a large part of the apparent Jewish immunity from certain forms of disease There may be a question, of course, as to whether or not the enforced conditions of life of a great portion of the Jewish people, through so many centuries, have not endowed them with a certain degree of immunity such as probably exists among most civilized races toward certain diseases which, comparatively mild among them, become devastatingly fatal epidemics when introduced into the virgin soil of savage races The white race, for example, is probably almost saturated with tuberculous infection, but resistance has been gained which makes it comparatively harmless to three-fourths of civilized mankind The mass of the Jewish race has been living for hundreds of years under most unhygienic conditions as regards this particular infection and with this, aided by their religious

ances, they may have acquired a still greater resistance to it than the rest of us On the other hand, they have acquired a certain neurotic predisposition, a condition apparently not guarded against by aseptic rules, but one, as the late Dr Beard used to claim, accompanied by a certain degree of apparent immunity to some other diseases Racial peculiarities and their relation to hygienic practices form an interesting subject for study, which has not been very thoroughly worked out even in the case of the Jews Such contributions as that of Dr Solis-Cohen are valuable as giving the public useful ideas, and it would not be a bad thing were the often quoted aphorism of a more recent religious reformer, "cleanliness is next to Godliness," more actively incorporated into the religion of the non-Jewish races generally

THE URINE IN CONTRACTED KIDNEY

The work of Cabot and others has shown how frequently the text-book picture of the urinary changes in kidney disease fails to correspond to the changes seen in actual practice In chronic interstitial nephritis we have flattered ourselves that the urinary changes are apt to be characteristic, likewise the high arterial tension and the cardiac hypertrophy Nagel[1] has recently analyzed the urinary and other changes in a number of undoubted cases of contracted kidney, and shows that some of the signs generally accepted as being almost constant are far from being so Thus, polyuria occurs in only one-third of the cases, a normal amount of urine being secreted in a second third, and a condition midway between polyuria and oliguria existing in about one-fifth of the cases Increased blood pressure is present in a little under three-quarters of the patients, and clinically appreciable heart hypertrophy in a little over four-fifths Night polyuria occurs in only one-quarter of the patients, while uremia occurred in every case observed These findings serve to emphasize the remarks previously made[2] regarding the necessity of correlating the clinical and laboratory findings before making a diagnosis, and they also suggest the necessity of avoiding a too strict adherence to the text-book pictures of disease Students of medicine often refuse to decide on a diagnosis because they expect too close a correspondence to the text-book description

FREAK LEGISLATION

With the present winter sessions of the state legislatures we may look for proposals for irrational and impracticable laws Some such measures have already been announced We hardly expect homicide of incurables to come up again—this year at least—as the verdict of public opinion has been so pronounced against it We may, however, include under the general head of "freaks" such propositions as one to prevent the propagation of degeneration by surgery, and one to compel physicians and surgeons to go "whiskerless' and beardless It would only be a step further to require them to be bald Some persons are so organized that they can not help going to extremes If we are to credit the press, laws are being considered in a western state that will compel each county clerk to publish quarterly a list of physicians, with the numbers of deaths that have occurred under their charge, another that shall prohibit a physician charging more than a set schedule of prices, still another providing that a physician shall not be able to collect his bill should the patient decide he had received no benefit from treatment, and yet one more which states that should a patient die while under treatment the physician's bill for services must be canceled We suggest that legislation along this line might be amplified. All pastors who fail to regenerate their entire congregations should have their salaries cut down proportionately to the *per capita* failures among their flocks, every lawyer who does not succeed in getting a verdict for his client should be unable to collect any fee for his services, all "patent-medicine" manufacturers should be required to sell their products at not more than 25 per cent advance over the cost price, and on the "no cure, no pay" basis, etc The field of class legislation is large and tempting

COEDUCATION

The system of education which provides for the teaching of boys and girls and of young men and young women together has been in vogue in the United States for some time, and until recently appeared to have found favor with all classes of the community A section of the general public, however, has, during the past two or three years, evinced a change of attitude on the subject and there is a tendency to question the benefits of coeducation Dr G Stanley Hall voices these objections and expresses the fear that girls brought up with boys will lose some of their feminine charm, while the boys, on the other hand, will take on some feminine characteristics At the same time that America is inclined to doubt the merits of coeducation, Great Britain is adopting it with some degree of enthusiasm Experiments in this direction are going on in different parts of England, and a large public school is to be opened soon at which the system will be given a thorough trial Of course, it is difficult, indeed impossible, to state offhand and definitely what the results of coeducation in America have been On the whole, it may be said that the result so far as the woman is concerned, will compare favorably with that in other countries, and it may be asserted also that the American man as yet has exhibited no such marks of effeminacy as will warrant the fear that the vigor or vitality of the nation is endangered Viewed from a purely medical standpoint, there are certain features of coeducation which at least require consideration An article published recently,[1] which dealt briefly with the subject, expressed the opinion that, although a woman should be so equipped that she may be able to make her own way in the world, she should not be allowed to overexert her mental faculties at the expense of her bodily health During the period of adolescence, coeducation perhaps might well be aban-

1 Deutsch Arch. f. klin Med January 1907
2. THE JOURNAL A. M. A. Jan 26 1907 p 333

1 The Lancet Dec. 8, 1906

doned, but the whole matter requires much further consideration from a medical standpoint before dogmatic statements can with fairness be made

POLLUTED WATER AND EPIDEMIC DIARRHEA

The letter[1] from Warren, Pa., printed in this issue is a contribution to an important, if little understood, problem On several previous occasions extensive outbreaks of intestinal disturbance have been reported in connection with the use of contaminated water One of the most thoroughly studied of these cases is that recorded by the well-known British health officer, Dr Thresh[2] In that epidemic, which occurred at Chelmsford, England, there were about 1,400 cases, mostly among adults, and fourteen deaths The original source of the water supply was apparently not exposed to infection The initially pure water, however, was passed into a small uncovered reservoir, through which it flowed to mix with water from a spring in a larger covered reservoir The small reservoir was not bricked over above the ground level, and during a heavy rain water from the immediate surroundings could run directly into it Adjoining one end of the reservoir was a garden patch which had been manured from time to time with road scrapings The outbreak of the epidemic followed heavy rains falling after three rainless weeks The incidence of the intestinal trouble in this particular outbreak was very striking, all the deaths and practically all the cases being among persons using the implicated water, while other persons in the same borough and in neighboring towns were exempt On epidemiologic grounds, therefore, there seemed every reason for attributing this outbreak of diarrhea to water pollution The similarity of the Chelmsford outbreak to the recent outbreak in Warren is marked, even to the probable contamination of the wells with surface washings We can not regard it as settled, however, that the colon bacillus found in the water was the specific cause of the trouble Little or nothing is known regarding the germ or germs causing such epidemics of diarrhea, and it is practically certain that, no matter what the specific cause, *B coli* would be found in contaminated waters of this character just as, for example, it would be found in a polluted water that gave rise to typhoid fever The trouble at Warren would seem to emphasize the need for protecting reservoirs, storage basins and the like from surface drainage

WHAT LEGALLY CONSTITUTES THE PRACTICE OF MEDICINE

As will be seen in the Medicolegal Department in this issue, the New York County Medical Society, after years of waiting and endeavor, has succeeded in obtaining from the Appellate division of the Supreme Court a legal definition of the term "practice of medicine" which should afford it the most valuable aid in the campaign which it has so long been carrying on against quackery Hitherto the question has not been fairly raised before the higher court, but the decision finally obtained seems to cover the ground and takes from the illegal practitioners what they have heretofore depended on for their chief support It remains to be seen how far it will affect the Eddyites, who deny the existence of disease and yet take exorbitant compensation for modifying its course by their alleged influence with the higher powers The point made by the court as regards diagnosis is a forcible one and it is rather remarkable that it should have been ignored by any state court in its decisions, and especially that there should have been on record in New York State any decision that would seem to ignore it This decision ought also to be of value in the effort to defeat the bill legalizing osteopathy before the New York Legislature It also adds one more to the many judicial opinions that help to make up the body of the law on this subject throughout the country and to put the question of what constitutes the practice of medicine on a rational basis

STATE CARE OF INEBRIATES

A bill is now before the Pennsylvania Legislature providing for the erection of a state hospital for the detention, care and treatment of persons addicted to the excessive use of alcohol or certain poisonous drugs—opium, chloral, cocain—and who are designated as inebriates, dipsomaniacs or drug habitués Two other states are successfully conducting asylums for inebriates and the results so far have been gratifying Modern views on inebriety tend to confirm the theory, as Dr Butler[1] declares, that the excessive use of alcohol and enslaving drugs is due to a diseased condition and one amenable to proper treatment While there may be some doubt as to the original responsibility for the disease in some cases, there is not so much question as to its being due, in large part at least, to an unfortunate heredity, the tendency often being aggravated by an unfortunate environment Hence, the call for a certain degree of state care for this class of cases is not an unreasonable one, and such care is well worth taking if it can make useful citizens out of even a small proportion of those who, through original defect and bad environment, have become not merely useless but dangerous members of society The present method of sending advanced alcoholic cases to asylums for the insane is objectionable in many ways, as every asylum medical official can testify, and is not justifiable if better means are available That better methods are possible in any state whose public charities are not politically controlled need not be seriously questioned The Medical Society of the State of Pennsylvania is actively endorsing the bill which is pending in that state and it is to be hoped that its wishes will be fulfilled We may add that similar plans might well be instituted in other states

1 Correspondence Department page 815
2 Brit Med Jour Sept. 26 1903

1 Butler (George F.) C Inebriat
THE JOURNAL A. M. A Feb

Medical News

ALABAMA.

Personal.—Dr William A Burns, Sheffield, has been appointed inspector of the convict board, vice Dr Nathaniel G Clarke, Ensley——Dr John J Horton, Huntsville, left for Nashville, Tenn., February 6, to undergo operation.

Anticocain and Pharmacy Bills Combined.—By agreement the Marritt anticocain bill, which prohibits the sale of cocain, morphin and similar drugs without the prescription of a reputable physician, and Dr Loveladv's bill, regulating the practice of pharmacy, have been merged into one law

Health Officers Named.—The Jefferson County Medical Society, which is legally the Board of Health of the county, elected the following health officers for the thirteen municipalities in the county outside of Birmingham Drs Samuel R. Caffey, Avondale, Joseph S Winters, Bessemer, Francis S Pugh, Brookside, Luckey A Jenkins, Cardiff, Thomas A Jones, East Lake, Jesse E Robbins, Ensley, George W Brown, Pratt City, Robert L Mitchell Warrior, William C Gewin, West End Alse W Bell, Woodlawn, Joseph H. Edwards, Wylam, Ethbirt C Rosamond, North Birmingham, and John W Howard, Irondale

Society Elections.—The Calhoun County Medical Society, at its annual meeting in Anniston, elected the following officers President Dr William Y White, Anniston, vice president, Dr Mark J Williams, *Oxford, and censor*, Dr John M Whiteside, Anniston——Walker County Medical Society held its annual meeting at Jasper January 18, and elected the following officers Dr George S Gilder, Carbonhill president, Dr Howard J Sankey, Nauvoo vice-president, Dr Titus Manasco, Carbonhill secretary, Dr William M *Cunningham Corona censor*, and Dr Andrew M Stovall, Jasper, county health officer—— At a meeting of the Morgan County Medical Society held in Decatur February 7, Dr Able R. Wilson, Hartsells, was elected president Dr B Walne Watson, New Decatur, vice president Dr J L *Gunter New Decatur*, secretary treasurer, and Dr Scott L Rountree New Decatur, county health officer The society decided to establish a minimum of $5 for examination for "old line" life insurance companies

ARKANSAS

Hospital Construction Progresses.—The Davis Hospital, Pine Bluff, which is now under construction, has already on hand about $20 000 of the $30,000 required to complete the building

License Revoked.—In the case of Dr Thomas E Rider, Hot Springs, charged with "drumming" Judge Bent revoked the license of the defendant to practice medicine and fined him $150

Newspaper Publicity.—The Jefferson County Medical Society, at its February meeting, unanimously decided to request all members of the society to refrain from giving out information to the lay press regarding professional matters

Society Meetings.—The president of the state society has addressed a communication to the county medical societies, urging that the anti drumming regulations provided by the federal medical board be strictly observed——At the recent meeting of the Union County Medical Society held at El Dorado Dr John A Moore Lisbon was elected president Dr Samuel E Thompson El Dorado, vice president Dr Joseph B Wharton El Dorado secretary Dr James M Sheppard El Dorado treasurer Dr H H Niehuss Wesson delegate to the state society, and Dr Edward F Hamm Shuler, alternate——At the annual meeting of the Mississippi County Medical Association, held in Blytheville February 14 the following officers were elected Dr Carlos C Stevens Blytheville president, Dr Oleander Howton Osceola vice president Dr Thomas G Brewer, Osceola secretary treasurer and Drs Thomas G Brewer, Osceola and S P Martin Chickasawba delegates to the state society——At a meeting of the Craighead County Medical Society held in Jonesboro recently Dr Charles M Lutterloh was elected president Dr William C. Haltom secretary and delegate to the state society and Dr Hugh L. Rains alternate all of Jonesboro

CALIFORNIA.

Antivaccination Law Defeated.—The bill of Assemblyman Sackett repealing the present general vaccination law was defeated by four votes only 37 out of the 41 votes required being in favor of the bill

New College Building Dedicated.—The new building for the College of Physicians and Surgeons San Francisco was formally dedicated January 18 Dr Winslow Anderson, president of the institution, delivered the address of welcome.

State Sanatorium for Consumptives.—The first step toward the establishment of a sanatorium for the treatment of tuberculosis was taken to day by Senator Keane, who introduced a bill appropriating $150,000 *for the purchase of a site and the* erection of a building

Banquet to Governor Pardee.—A banquet and reception in honor of Dr George C Pardee, ex governor of California, was given January 28 by the Alameda County Medical Association, of which Dr Pardee is a member Dr Daniel Crosby, Fruitvale, acted as toastmaster and delivered the address of welcome, to which Dr Pardee made suitable reply

Medical Library Dedicated.—A formal dedication of the Medical Library *donated to the medical profession of Los Angeles* by Dr W Jarvis Barlow took place February 8 Dr Barlow made a brief address, at the close of which he presented the deed of the property and the keys of the library to the Clinical Association Dr Joseph Kurtz, president of the association, *accepted the trust. The building alone without the grounds* cost Dr Barlow $32,000

Hospital Notes.—The Santa Monica Bay Hospital opened for the reception of patients March 1——The Claremont Hospital Association, Oakland has been incorporated with a capital stock of $175,000 by Drs Hayward G Thomas, Frank L. Adams, Oliver D Hamlin and Edward N Ewer, all of Oakland, *and Dr George F Reinhardt, Berkeley*——The Southern Pacific Railway Company has decided to build a modern hospital on the land it recently purchased for $150,000 near the Park Panhandle, San Francisco

Medical Licensure.—A bill has been introduced into the legislature doing away with the separate board for licensing osteopaths and placing full control of medical license in the *hands of a composite board Two osteopaths are placed on this* board Examination on therapeutics, etc, has been done away with, and applicants are required to pass an examination in all fundamental branches The reciprocity clause has been dropped and five credits are allowed for each ten years of *reputable practice It is believed that this bill will be passed*

Ill and Injured.—Dr W G Galbraith, Los Angeles, chief surgeon of the Greene Consolidated Copper Company, Cananea, Mexico, is seriously ill at his home——Dr Charles H. Thompson, Santa Rosa, who has been seriously ill, is reported to be convalescent.——Dr Charles E. Stone, Marysville, has recovered from his recent illness——Dr Walter C Smiley Long *Beach, lost his balance and fell from a trolley car, January 31,* dislocating his shoulder and sustaining severe scalp wounds and also concussion of the brain.——Dr W T F Smith, San Francisco, was struck by an automobile, January 31, and suffered severe contusions and sprained his right ankle——Dr Martin Schnabel, Newcastle, was thrown from his buggy recently and badly bruised.——Dr William J Wickman San Rafael, was thrown from his buggy in a runaway accident and fractured his left arm

Personal.—Dr Sidney R Daunenbaum, Berkeley, will leave for Europe in a few days——Dr Ferdinand Stabel Redding, has been appointed medical examiner for the twelfth civil service district.——Dr Ethel L. Leonard has been appointed bacteriologist to the health department of Los Angeles—— Dr Edward R Taylor has been elected president of the Lane Hospital San Francisco, vice Dr C N Ellinwood——Dr Luther M Powers has been reappointed health officer of Los Angeles——Dr James W Wood Long Beach, is taking a trip to Rochester Minn, and New York City——Dr R Edmond Dixon Hanford, has been elected physician of Kings County ——Dr Marcia Gilmore Pasadena, has returned from a visit to Chicago——Dr Samuel S Bogle, Santa Rosa has been reappointed physician of Sonoma County——Dr George T Hesser Folsom City, has been appointed health officer of Sacramento County and Dr George L. Stevenson Sacramento, physician at the dispensary——Dr Dudley Tait San Francisco, has been elected corresponding member of the Surgical Society of Paris

Society Meetings.—At the annual meeting of the Redlands Medical Society the following officers were elected President Dr Walter B Powers, vice president, Dr Charles E. Ide and secretary Dr John L. Avey——At a meeting of Contra Costa County Medical Society held in Martinez January 20 Dr Frank Rattan Martinez, was elected president Dr Francis F Neff, Concord vice president Dr J Walter Key Crockett secretary Dr A H White Crockett assistant secretary, Dr Jahial S Riley Crockett treasurer Dr Joseph T Breneman Martinez delegate to the state society and Dr Hawley N Barney Point Richmond alternate——At a meeting of Fresno County Medical Society, Dr John R. Walker was elected presi

dent, Dr Asbury N Loper, vice president, Dr L R. Willson, secretary, and Dr Thomas M Hayden, treasurer, all of Fresno ——At the annual meeting of the Sonoma County Medical Society, Dr James R. Swisher, Healdsburg, was elected president, Dr James H. McLeod, Santa Rosa, vice president, Dr Reuben M. Bonar, Santa Rosa, secretary, and Dr Lizzie Lain, Santa Rosa, treasurer ——At a meeting of the Long Beach Medical Society, held January 16, Dr Frank L Wood was elected president, Dr Frances L Rogers, secretary treasurer, and Dr Homer O Bates, councilor

ILLINOIS

Damage Suit Dismissed.—The Varvil suit for malpractice in which damages of $10,000 were sought against Dr Albert L Ward Bement, in the Piatt County Circuit Court, has been dismissed.

Colony for Epileptics—Dr W P Spratling, superintendent of the New York State Colony for Epileptics, Sonyea, gave an address in the senate chamber, Springfield, February 26, on the colony treatment of epileptics, under the auspices of the Children's Hospital Society, Chicago

Personal.—Dr Charles E Donahoo Hillsdale, is ill with scarlet fever ——Dr Harry B Bailey, Rockford, was operated on for appendicitis at St Anthony's Hospital, February 13 ——Dr Frederick A Renner has removed from St Jacob to Benld —— Dr William J Rideout, Freeport, sailed last week for Europe

Hospital Notes—The women of East St Louis have organized a ladies' auxiliary in the interests of the Henrietta Hospital The first work which they will undertake will be the erection of a dormitory for nurses, so that the quarters now used for that purpose may be devoted to a children's ward —— A movement is on foot to erect a hospital at Benld, Macoupin County

Chicago

Children's Hospital Benefit.—On the evening of March 11 Maude Adams will give a performance of "Peter Pan" for the benefit of the Children's Hospital Society

Personal—Dr Frank Billings and daughter sailed for the Mediterranean, February 19 ——Dr William J Butler left for Europe, February 23 ——The case against Dr Wilbur V Johnson, charged with assisting in an illegal operation, was dismissed February 15

Mortality—The number of deaths for the week ended February 23 was 707, 9 more than for the previous week and 113 more than for the corresponding week of 1906 This mortality is equal to an annual death rate of 17 49 per 1,000 Pneumonia caused 161 deaths, consumption, 79, heart diseases, 50, violence, including suicide 46, nephritis, 42, scarlet fever, 27, cancer, 25, diphtheria, 20, and whooping cough and typhoid fever, each, 8

Infectious Diseases—During the week, ended February 23, the cases of diphtheria, measles and scarlet fever have shown a decided and substantial reduction The reduction has been steady and dates from the week the medical inspectors were put to work This emphasizes the necessity of a permanent medical inspection corps for public schools ——Two cases of smallpox were discovered during the week and sent to the Isolation Hospital One patient came from Minneapolis and the other from Lancaster, Canada

KENTUCKY

Medical Student Dies—T Vernon Gamron, a senior student at the Kentucky School of Medicine, Louisville, died from heart disease at his boarding house recently, aged 24

Hospital to be Enlarged.—The trustees of the Children's Free Hospital, Louisville, have decided to enlarge their present quarters sufficiently to accommodate twice the number that can be taken care of at present Funds have been provided for the improvements

Colored Physicians Organize—The colored physicians of Louisville organized the Falls City Medical Association February 5, with the following officers Dr William T Merchant, president, Dr J A C Lattimore, vice-president, Dr Ellis D Whedbee secretary, and Dr Percy R. Peters, treasurer

Illegal Practitioner Arrested—"Dr" John A Taff, convicted in the local courts for practicing without a license, he having been running a "locomotor ataxia works," has just been arrested at Evansvile, Ind, where he went after his conviction in Louisville and returned on requisition During the trial here he stated he was a graduate of Columbian University, Washington D C and that his wife, from whom he is divorced, had the diploma Investigation indicated that he has never obtained a diploma from Columbian University, and he was arrested for perjury and will be tried in Louisville on that charge

MARYLAND

Unlicensed Practitioner Fined.—For practicting medicine without first having registered, "Dr" J F Wagner, Hagers town, is reported to have been fined $50 and costs February 2

Hospital Equipment Sold.—The Frederick County Hospital Association, which formerly conducted the Emergency Hospital in Frederick, has sold the equipment of the latter to the Union Hospital Association, which has recently purchased a building and hopes to open a hospital

Prevention of Tuberculosis—On February 14 Dr William S Thayer, Baltimore, addressed the Washington County Medical Society at Hagerstown on tuberculosis and the need of carrying out the laws for its prevention On the same evening addresses were made by Dr Thayer and Mr H. Wirt Steele executive secretary of the Maryland Association for the Relief and Prevention of Tuberculosis, at a public meeting in Hagers town A branch association was formed for that section

Officers Elected.—At the annual meeting of the Maryland Association for the Relief and Prevention of Tuberculosis, held in Johns Hopkins University, February 12, Dr William H Welch presided in the absence of the president, and the following physicians were among the officers elected President, Dr Henry Barton Jacobs, Baltimore, honorary president, Dr William Osler, Oxford, England and vice presidents Drs James Bosley, Baltimore, Hiram Woods, Baltimore, John S Fulton, Baltimore, Joshua W Hering, Westminster, Richard S Hill, Upper Marlboro, Henry M Hurd, Baltimore, Samuel T Earle, Baltimore, Thomas L Shearer, Baltimore, Mary Sherwood, Baltimore, William S Thayer, Baltimore, Isaac R Trimble, Baltimore, William H Welch Baltimore Charles M Ellis, Elkton and Louis B Henkel, Jr, Annapolis

Baltimore

Bequest.—In accordance with the expressed wishes of the late Bernard Kohn, his children have given $2,500 to the Consumption Hospital and $500 each to the Hebrew Hospital and the Nursery and Children's Hospital.

Site for Sanatorium Selected—It is announced that the Maryland Tuberculosis Commission has elected a site, consisting of 240 acres, for the proposed state sanatorium for tuberculosis on South Mountain, near Sabillasville, 66 miles from Baltimore

Visiting Nurses' Report—At the annual meeting of the Instructive Visiting Nurses' Association, held February 11, it was reported that eight nurses are now employed, that 22 336 calls were made during the year, and that, on January 1, 500 cases were under care

Addition to Hebrew Hospital—The plan of the Dr Samuel L Frank memorial addition to the Hebrew Hospital calls for a four story building with basement and subbasement with a frontage of 93 feet and a depth of 58 feet. It will be connected with the present hospital by a corridor The donation for the erection and equipment amounts to $84,000

Result of Public School Inspections—The medical examiners in the public schools report that 12 109 children were examined in January Of that number, 4,302 were found to have defects or ailments and 118 were excluded The principal defects or ailments were Blepharitis or sore eyes 135, strabismus 80 eye strain, 604, pediculosis, 1 436 imperfect teeth, 452 adenoids 597, mental deficiency 45 skin diseases, 91, enlarged tonsils, 1,344 and unvaccinated, 256

Personal.—Dr Charlotte S Murdoch who has been associated with the work of Dr G Campbell Morgan London for some years, has been visiting in Baltimore and will sail for Shanghai from San Francisco March 8 ——Dr Arthur Wegefarth was thrown from his buggy February 18 and seriously injured —— Dr Adolph Eisenberg sustained painful injury to his shoulder by being thrown from his buggy ——Dr Howard A Kelly was given the degree of LL.D by the University of Pennsylvania February 22

MASSACHUSETTS

Personal.—The Brockton Hospital elected the following officers Vice president, Dr Amasa F Paine and executive committee, Drs Jesse H Averill Samuel J Gruver N C. King Arthur L Beals and Fred S Faxon The medical board will include in addition Drs Henry F Borden Jonas T Bacon Frank E. Constans and Frederick J Ripley ——Dr Louis Z Normandin has been appointed a member of the board of health of New Bedford ——Dr William W Hartwell has been

elected city physician of Malden, and Dr. Charles E. Prior has been elected a member of the board of health, vice Dr. Charles D. McCarthy, recently elected mayor.——Dr. Frank G. Wheatley, Abington, has been nominated by the governor as associate medical examiner for the second Plymouth district.——The appointment of Dr. George B. Magrath, Boston, as medical examiner for a portion of the Suffolk district has been confirmed by the council.——Dr. Charles H. Thomas, Cambridge, has been appointed a member of the local board of health, and Dr. Albert P. Norris, milk inspector.——Dr. Frank D. Stafford has been inaugurated for the third time as mayor of North Adams.——Dr. Agavinie Gilbakian, Boston, has been recommended as medical missionary to India by the Women's Society of the United Presbyterian church.——Drs. Timothy J. Daly, Robert W. Forster, John B. Bain, Albert W. Hancock and L. G. Beeley have been appointed physicians of the Lawrence General Hospital.

MINNESOTA.

Endowment for Hospital.—Matthew G. Norton, lumberman of Winona, has announced that he has settled an endowment of $50,000 on the Winona General Hospital. The endowment is in the form of New York City bonds, maturing in 1956, with interest at the rate of 4 per cent. per annum, bringing the total amount of the gift up to $150,000.

Smallpox.—Smallpox is reported from Frazee, where several cases exist.——In the country around Bemidji five new cases of smallpox have been found.——At the last session of the Biwabik village council, it was decided that the village is not responsible for the cost of the care of smallpox patients.——At the Pacific Hotel, Minneapolis, 5 new cases have been reported.——There are at present in the Isolation Hospital, Duluth, 15 cases of smallpox, practically all of which were brought in from unorganized towns and camps throughout the country.

Personal.—Drs. Knut O. Hoegh, Minneapolis, and Eduard Boeckmann, St. Paul, have been made knights of the Order of St. Olaf by King Haakon of Norway.——Dr. Charles W. More, Eveleth, has been elected health officer of St. Louis County.——Dr. Jacob C. Rothenburg, Springfield, has been elected chairman of the board of health of Brown County.——Dr. George S. Wattam, Warren, has been reappointed a member of the advisory commission of the State Sanatorium for Consumptives.——Dr. R. Ignatius Hubert, St. Cloud, has been appointed a member of the Stearns County Board of Health.

State Board of Health Report.—The annual report of the State Board of Health shows that the board received in 1906 an appropriation of $21,000, the same amount which was received 20 years ago, and recommends an increase. It reports that deaths from tuberculosis in Minnesota amount annually to 2,000, and that at the same time there are probably 10,000 individuals suffering from the disease. It calls attention to the fact that the continued prevalence of typhoid fever is a disgrace to the community and should be prevented by care of sewage and water supplies, and also comments on the prevalence of smallpox for the last ten years in the state, and urges the provision of compulsory vaccination laws. During the year 100 people were bitten by rabid animals. Of these 69 went to Chicago or Ann Arbor for treatment. The board urges the establishment of a Pasteur institute and recommends the passage of a burial permit law that vital statistics may be compiled.

Society Meetings.—The Southwestern Minnesota Medical Association met at Pipestone and elected the following officers: President, Dr. Walter E. Richardson, Slayton, vice president, Dr. William D. Beadle, Windom, secretary-treasurer, Dr. Emil King Fulda, delegate to the state society, Dr. George D. Rice, Pipestone, and alternate, Dr. George G. Balcom, Lake Wilson. Windom was selected as the place of meeting in July.——At the annual meeting of the Olmsted County Medical Society, at Rochester, the following officers were elected: President, Dr. John E. Crewe; vice-president, Dr. Fred R. Mosse, and secretary-treasurer, Dr. Justus Matthews, all of Rochester.——A meeting of the Upper Mississippi Valley Medical Association was held at Little Falls, when the following officers were elected: President, Dr. George R. Christie, Long Prairie; vice president, Dr. John Burton Holst, Little Falls; secretary, Dr. Charles F. Coulter, Wadena; treasurer, Dr. Paul E. Kenyon, Wadena, and censor, Dr. Joseph G. Millspaugh, Little Falls.

Tuberculosis Conference.—The National Tuberculosis Exhibit was shown in Minneapolis, February 2 to 13, inclusive, and created great interest. On February 5, in connection with the exhibit, the Western Conference on Tuberculosis was held. Among the speakers were Dr. Frank F. Wesbrook, Minneapolis, Dr. Arnold C. Klebs, Chicago, Dr. John W. Bell, Minneapolis, Dr. H. L. Taylor, Dr. John S. Fulton, Baltimore, and Dr. John M. Beffel, Milwaukee. At the close of the session the following officers were re-elected: President, Mr. George C. Christian, Minneapolis, vice presidents, Drs. Charles L. Greene, St. Paul, and Louis B. Wilson, Rochester, and treasurer, Mr. J. H. Skinner, St. Paul. The conference is expected to embrace the states of Ohio, Michigan, Illinois, Indiana, Missouri, Iowa, Wisconsin, Minnesota and the Dakotas. On February 6 the State Association for the Relief and Prevention of Tuberculosis held its session. Dr. Cornelius A. Harper, Madison, Wis., spoke on "Tuberculosis from the Standpoint of a Health Officer," Dr. James W. Pettit, Ottawa, Ill., on "The Sanatorium Treatment of Tuberculosis," and Dr. Harry A. Tomlinson, St. Peter, on "The District Nurse in Connection with Tuberculosis."

NEW YORK.

To Abolish the Ringing of Church Bells.—The New York Society for the Suppression of Unnecessary Noises is said to be about to begin a movement to abolish the ringing of church bells in cities.

High Birth Rate.—The annual report of the State Health Department shows that the births during the year 1906 outnumbered the deaths by over 40,000. There were in the state 183,012 births, 140,773 deaths and 87,870 marriages.

Marine Hospital.—Ground will soon be broken in Buffalo for the long contemplated marine hospital. It is expected that the building will be completed in a year. It is a three-story and basement building, 114 feet long, with an average width of 62 feet, and will be of brick and stone construction.

Infirmary Completed.—The Lackawanna Steel Company has completed the new dispensary at West Seneca. It is a two-story building, equipped for operative work. Heretofore injured workmen have been give first aid at the dispensary, but when operation was necessary this was done at the Moses Taylor Hospital.

The Census of the Blind.—While the canvass of the entire state is not yet complete, about 5,000 names have been handed in and the commissioner is now ready to begin work. The census shows that there were 184 persons blind or partially blind in Orange County, in Westchester County there were 220, in Rockland 32, and in Putnam 21, making 457 in four counties.

Personal.—Dr. Walter S. Goodale has been appointed tenement and lodging house inspector at Buffalo.——Dr. Frederick J. Barrett, Buffalo, has been appointed an examiner of applicants for pensions or increase of pensions for the eye, ear, nose and throat at Buffalo.——Drs. Harry R. Trick, Charles P. Chapin and Dr. Clark have been appointed trustees and physicians in charge of the Riverside Dispensary, Buffalo.——The Æsculapian Club of Buffalo, on February 6, tendered a dinner to Dr. Ernest Wende. Dr. Francis M. O'Gorman acted as toastmaster.

State Cancer Laboratory Report.—The annual report of the State Cancer Laboratory, Buffalo, announces that researches during the last year confirm the statement made by Dr. Roswell Park in 1898, that cancer shows a progressive and steady increase. This is estimated at 25 per cent. for the last three years. The report recommends that it would be well for health officers to enforce the proper sterilization and disposal of all dressings used on cancer patients, and the proper fumigation of rooms occupied by such patients.

Protest Against Bronx Sewer.—The Merchants' Association has filed a protest with the Secretary of War, declaring that unless the United States government interferes and stops the wholesale dumping of sewage into the Hudson River the harbor of New York will be completely ruined for shipping purposes. They protest especially against the construction of the Bronx Valley sewer. This contemplated sewer would drain the Bronx Valley, providing for the disposal of sewage and manufacturing waste for a population of 850,000 and would empty into the Hudson River north of Spuyten Duyvil.

First-Aid Appliances in Factories.—A bill has been introduced into the legislature providing that every person, firm or corporation operating a factory or shop shall at all times keep, free of charge to the employés, a medical and surgical chest containing all necessary medicines and instruments for first aid to the ill or injured and that the board of health of each city or town shall see that this act is enforced. The penalty for violating this act is a fine of not less than $5 nor more than $500 for every week during which this violation continues.

Coroner and Medical Examiner.—Since the office of coroner has been abolished in Erie County and that of medical examiner created, there has been much friction with the several district physicians The medical examiner construed the law to mean that if a person died without medical care and nothing indicated that the death was due to violence, the district physician should issue the death certificate, and that the medical examiner and his assistant should attend only to deaths by violence In a recent case, the cause of death could not be determined by the district physician, and the medical examiner was asked to issue the death certificate He refused the request, as there was no reason to believe that the death was due to violence. The corporation counsel of Buffalo who was asked by the health commissioner to give an opinion, stated that if the city or district physician is not satisfied as to the cause of death, it becomes the duty of the medical examiner to make the necessary investigation

News from the Assembly.—Coroner Harburg appeared before the cities committee and urged favorable consideration of the bill prohibiting removals from hospitals in New York City The cities committee gave the matter no consideration and did not report it, but the Senate cities committee, before which Coroner Harburg did not appear, reported the Sohmer bill, prohibiting such removals and prohibiting the superintendent of a hospital to refuse admission to an applicant if brought in an ambulance or other vehicle and not suffering from a contagious disease.——The Wainright bill, which has been introduced into the Assembly, adopts for the state the national food law in every particular.——A bill is pending providing that there shall be four coroners in Manhattan, two in the Bronx, four in Brooklyn, three in Queens, and one in Richmond. ——The Reese bill makes pasteurization of milk a municipal function under the direction of the Health Board and the selling of any milk that has not been put through pasteurizers would mean fine and imprisonment The bill states that the Health Commissioners shall designate pasteurizing stations to which every quart of milk shall be taken This would, of course, be in addition to inspecting the source of supply Under this bill the health board would have authority to seize and destroy any milk found unpasteurized.

Sanitation in the State.—Eugene H. Porter, State Health Commissioner, requires that all cases of tuberculosis be reported to him, with a view of securing definite information on which to base steps to prevent its spread. A sanitary map of the state is being prepared and a systematic study of water sheds and an investigation of stream pollution are being carried on The continued pollution of the streams of the state must cease and no permits to discharge sewage into the waters of the state will be granted except for very cogent reasons It is urged that the commissioner should also have authority to order sewage taken out of a stream when necessary and within a given time It is suggested that a commission ought to be created to coöperate with the Health Department in so important a matter as the pollution of the waters of New York harbor An inspection of the packing houses, slaughter houses and meat markets showed many to be in bad condition They have been directed to be put in sanitary shape at once and frequent inspection was urged. Particular attention will henceforth be paid to food stuffs manufactured in this state A campaign for pure milk throughout the state was urged During the month of August of 1906 there were 2,339 deaths under two years of age due to diarrhea and enteritis The necessity for inspecting the eyes of school children was pointed out and it was recommended that the subject of car sanitation receive attention

New York City

Trichinosis on Lower East Side.—At present there are eight cases of trichinosis in Bellevue Hospital four men and four women They are all from the same locality, the lower end of First avenue near Second and Fourth streets

Personal.—At a dinner of the British Schools and Universities Club Dr John R. Shannon the retiring secretary was presented with a loving cup.——Dr George F Poole physical director of the Twenty third Street Branch of the Young Men's Christian Association will have charge of all the water sports at the Sportsman's Show which opens March 1 in Madison Square Garden

Hospital Staff Dine.—The seventh annual dinner of the directors and staff of the Manhattan Eye Ear, Nose and Throat Hospital was held on the evening of February 19 This was the first dinner since the institution has moved into its new building Dr A. Alexander Smith spoke on "The Responsibility of the Hospitals as Educational Institutions." Dr Frank Van Fleet spoke on "Our Hospital What It Has Accomplished, Its Requirements and Responsibilities"

Contagious Diseases.—There were reported to the sanitary bureau of this city for the week, ended February 16 356 cases of tuberculosis, with 191 deaths, 282 cases of diphtheria, with 52 deaths, 263 cases of scarlet fever, with 21 deaths, 248 cases of measles, with 6 deaths, 52 cases of whooping cough, with 6 deaths, 42 cases of typhoid fever, with 12 deaths, 13 cases of cerebrospinal meningitis, with 13 deaths, 91 cases of varicella and 2 cases of smallpox making a total of 1,349 cases and 301 deaths

A Building for the Blind.—The New York Association for the Blind wants $100 000 for a building in which to house the association and which will furnish a salesroom for the work of the blind and also quarters for a men's workshop Andrew Carnegie and Smith Ely have promised $10 000 each and Jacob Schiff $5,000 on condition that the remainder of the fund necessary is raised. It was shown that New York is woefully behind European countries in caring for the blind, many of whom are only waiting the opportunity in order to become self supporting and useful instead of a burden on the state

A Hearing on the Milk Question.—There has been a discussion of the milk question before the committee on public health of the Board of Aldermen Dr Darlington sent word that his department was at work on a series of experiments to determine the feasibility of pasteurization and the most practical and inexpensive way of carrying it out There was an ordinance introduced by Alderman Freeman directing that no raw milk should be sold in the city unless it was bottled and sealed under the supervision of inspectors of the Health Department and that the bottle should be sealed by the inspector There will be several public hearings before reporting to the board It is the intention of the committee to take advantage of these hearings to examine thoroughly into the conditions under which milk is sold in this city

Money for Hospitals.—At a meeting of the German Charity Ball committee it was decided to divide the proceeds of that function amounting to $11,262 among the following institutions The German Hospital the Isabella Heimath St Mark's St Francis the German Poliklinik, the German Society, the Deutscher Frauen Verein and the West Side Dispensary.—— Jacob Puppert has given $10 000 to the German Hospital and Dispensary for the erection of a building for contagious diseases, and George Ehret gave $5,000 for the purchase from the city of a piece of ground which is to be used for the erection of an additional ward to the hospital.——The $10,000 distributed annually among charitable institutions by the Siegel Cooper Company will be divided this year among 277 institutions St Rosa's Home for Incurable Cancer and St Joseph's Home for Consumptives are among the institutions receiving $100 Among those receiving $50 are the Home for Crippled Children the New Rochelle Hospital St John's Hospital the Association for Improving the Condition of the Poor and the Home for the Blind

PENNSYLVANIA.

Appropriation for Care of Insane.—The House Appropriations Committee has reported favorably on the bill appropriating $2,500 000 for the care and treatment of the indigent insane in state and county institutions for the two fiscal years beginning June 1 Appropriations of $1,590 000 have been made for buildings at the state asylums at Harrisburg Norristown Danville Warren and Wernersville This will provide comfortable accommodations for 1,950 additional inmates

Philadelphia

Internes Wanted.—The examination of candidates applying for service as resident physician in the Presbyterian Hospital, will be held at the hospital Wednesday April 17 at 7 p m

Deaths of the Week.—There were 656 deaths in the city for the week ended February 16 an increase of 61 as compared with the previous week. Of the total number 92 were caused by pneumonia, 90 by tuberculosis 66 by heart disease, 42 by Bright's disease, and 39 by typhoid fever

Diphtheria at Hospital.—Four cases of diphtheria developed at the University Hospital making a total of seven cases in that institution and one in the Baldwin House a dormitory of the university Dr Robert Grant Torrey resident at the hospital has been stricken with the disease and placed in the Isolation Hospital

Deaths and Disease.—There were 650 deaths in this city during the week ended February 24 an increase 6 over number for the previous week. The [illegible] Typhoid fever 47 heart disease 50, [illegible]

Bright's disease, 55 There were 415 new cases of typhoid fever during the week, an increase of 10 over the number of last week The number of cases this week makes a total of 3,224 since January 1

Reception to White.—A reception was given by the medical students of the University of Pennsylvania, February 12, to Dr J William White on his return from Europe The opening address of welcome was made by O F Lamson, president of the senior class Besides the reply Dr White addresses were made by Vice Provost Edgar F Smith and Drs J Chalmers Da Costa, Ernest LaPlace, Alfred Stengel and Alfred C Wood.

Hospital Officers Elected.—The following have been elected officers of the Samaritan Hospital Medical Society President, Dr James C Attix, vice-presidents, Dr Wendell Reber and Dr Collier F Martin, secretary and treasurer, Dr Jesse O Arnold, and executive committee, H. C Groff, and Drs Sherman F Gilpin and Benjamin F Devitt ——The following have been elected officers of the Woman's Hospital Medical Society President, Dr Elizabeth R Bundy, vice president, Dr Belle A. Schisler, secretary, Dr Annie L Conner, and treasurer, Dr Miriam M. Butt

Joint Meetings.—The Kensington Branch of the Philadelphia County Medical Society has invited the educational leaders of that section to participate in a series of meetings just inaugurated intended to instruct the general public on urgent questions of hygiene, sanitation and medicine School teachers, manufacturers, physicians and clergymen will here meet the general public of Kensington, and by following the symposia of able specialists, will be able to instruct pupils, congregations, employés and patients with the most recent data on the topics mentioned. The first symposium is on "Prevention of Tuberculosis in Industrial Section"

Wants One Board.—By unanimous vote, the Philadelphia County Medical Society adopted a resolution endorsing the bill now in the legislature providing for the abolition of the present system of three boards of examiners and the appointment by the governor of a single board of examiners consisting of nine members to grant licenses to practice medicine. Dr Matthew Woods offered the resolution, following a talk on the provisions of the bill by Dr Henry Beates, declaring that recent statements put out by opponents of the measure were absolute misrepresentations Dr Beates read a section of the bill to show that no one school of medicine was given any advantage in the constitution of the board of examiners

TEXAS

Hospital Notes.—At a meeting of the board of trustees of the King's Daughters' Hospital, Temple, January 10 it was decided to proceed with the construction of an addition of 10 rooms to the main building ——Brooke Smith, Brownswood, has given five acres of land for a hospital site, provided that a hospital be built at a cost of at least $10,000, and its maintenance be provided for ——The erection of a three story and basement hospital building at Temple by the Gulf, Colorado & Santa Fé Railway Employés' Hospital Association is now fully assured ——Arlington Heights Sanitarium, now under construction, is to be enlarged, so that its capacity will be 37 patients, instead of 15 patients as originally contemplated

Personal.—Dr James P Tucker, Galveston, has been appointed quarantine officer at Galveston Pass, vice Dr Edgar F McClendon ——Dr John H Florence Brownsville, has been appointed to succeed Dr William P Thompson as state quarantine officer at Sabine ——The following assistant physicians have been elected for the North Texas Hospital for Insane, Terrell Drs James R Nichols George F Powell and Claude M Poff, all of Terrell and Dr William J Johnson, Cookeville ——Dr Roy H Gough Hillsboro, has been appointed deputy district councilor ——Dr Benjamin M Worsham has been re elected superintendent of the State Lunatic Asylum, Austin, and Drs John W Bradfield, Jacob T Wilhite, G Horace Gilbert and Margaret Holliday have been re elected as assistant physicians

Society Meetings.—At the annual meeting of the Ellis County Medical Association, held in Ennis January 15 the following officers were elected Dr Joseph A Tate Ennis, president Dr F A Pierce, Ferris, vice president, Dr Walter P McCall, Ennis secretary treasurer, Dr James C Loggins, Ennis delegate to the state association Dr Warren T West, Waxahachie alternate and Drs Henry O Stacey, Waxahachie, Oscie P Sweatt Waxahachie, and Charles P Cook Ennis, censors ——At a meeting of the Taylor County Medical Society, held in Abilene January 16 Dr Alonzo O Scarborough Snyder, was elected president, Dr Franklin E. Haynes, Abilene, vice president, and Dr Shirley C Gage, Abilene, secretary-treasurer ——At the annual meeting of the Nueces County Medical Association, held at Corpus Christi, January 18, the following officers were elected President, Dr Henry Redmond, Corpus Christi, vice president, Dr W E Carruth, Corpus Christi, secretary treasurer, Dr C H Yeager, and censors, Drs William T Harris, Mathis, and Harry Heany and S T Dodge, Corpus Christi, censors ——At the annual meeting of the Robertson County Medical Association, held in Hearne, the following officers were elected President, Dr Louis M Bassett, Hearne, secretary, Dr John H Petty, Franklin, and delegates to the state association, Drs Daniel Parker, Calvert, George M. Abney, Franklin, and Felix E Collard, Wheelock ——The Red River County Medical Society met in Clarksville and elected Dr Nowlin Watson, Clarksville, president, Dr Robert Jones, Rosalie, vice president, and Dr James T Hutchinson, Annona, secretary treasuer

VERMONT

Objects to Use of Names.—At the quarterly meeting of the Lamoille County Medical Society, held in Morrisville, January 9, a resolution was adopted requesting the various papers throughout the state not to mention the names of physicians in connection with medical items regarding practice A resolution was also adopted regulating fees for life insurance examinations

WASHINGTON

"Patent Medicines" Not to Be Sold Without Prescription.—Chief of Police Wappenstein, of Seattle, recently issued an order to druggists forbidding them to sell "patent medicines" containing opiates, without a prescription from a physician The order is simply an enforcement of a city ordinance

Society Elections.—At the annual meeting of the King County Medical Society, held at Seattle, the following officers were elected President, Dr H M. Reed, vice president, Dr P H. VonPoole, secretary, Dr H Eugene Allen, and Dr J C Moore, treasurer The annual reception and ball followed the election ——At a meeting of the Whitman County Medical Society, held at La Crosse, January 21, Dr A E Stuht, Colfax, informed the society that the State Board of Medical Examiners for the state of Washington would pay $50 toward the prosecution of illegal practitioners of medicine in the state The society adopted and confirmed a resolution that no member should make insurance examinations for any of the old line insurance companies for a fee of less than $5 It was also recommended that all members adhere strictly to the resolutions adopted by the American Medical Association along these lines ——At the annual meeting of the Spokane County Medical Society January 3, the following officers were elected President, Dr Walter F Morrison, vice presidents, Drs John G Cunningham and Harold H McCarthy, secretary, Dr Carroll L. Smith, treasurer, Dr Frank Rose, and censors, Drs George K. McDowell, Wilbur W MacKenzie and Peter D McCornack, all of Spokane ——At the annual meeting of the Lincoln County Medical Society, held in Sprague February 6, the following officers were elected Dr Richard Connell, Odessa, president, Dr J E Bittner, Sprague, vice president, Dr John M Gunning Harrington, secretary treasurer, and Drs E C Lanter, Wilbur, Rufus P Moore, Davenport, and John M Gunning, Harrington, censors

WEST VIRGINIA.

Society Elections.—At the annual meeting of the Marion County Medical Society, held in Fairmont, the following officers were elected Dr Hal Hall, president Dr William C Jamison vice president Dr James W McDonald, secretary, Dr William H Sands, treasurer, all of Fairmont, Dr James H. Riedy, Monongah, censor, and Drs Henry R. Johnson and Claude L. Holland, Fairmont delegates to the state association ——At a meeting of the Little Kanawha and Ohio Valley Medical Society held in Charleston January 5, the following officers were elected President Dr Thomas A Harris Parkersburg, vice presidents, Drs Robert L Brown, Parkersburg, James B Wilson, Pennsboro, and Wade H Young, Ben's Run, secretary, Dr O Dustin Barker, Parkersburg, treasurer, Dr C W Hudson, Parkersburg, and delegates to the state association Drs Lonzo O Rose, Parkersburg, and James B Wilson, Pennsboro

WISCONSIN

Licenses Revoked.—As the result of proceedings instituted by the State Board of Medical Examiners, licenses to practice medicine held by Drs Edwin F Kessler, Albert Preuss, Charles F Peters and Hedwig Peters, graduates of an unrecognized medical school, were revoked

Hospital Trustees Elect.—At the annual meeting of the trustees of the Emergency Hospital, Milwaukee, Dr Frank B Golley was elected president, Dr Ralph Elmergreen, secretary Dr Louis Fuldner, house committee, and Drs Arthur T Holbrook and Gerhard A. Bading, committee to discharge patients

Medical Society Elections.—At the annual meeting of the Milwaukee County Medical Society Dr Lewis G Nolte was elected president, Dr William H Washburn, vice president, Dr Joseph Kahn, treasurer, and Dr Alfred W Gray, secretary, all of Milwaukee.——At the annual meeting of the Sheboygan County Medical Society Dr Otto B Boek was elected president, Dr Conrad T Tasche, vice president, Dr William F Zierath, secretary treasurer, Dr William H. Gunther, censor and Dr Arthur E Ginter, delegate to the state society, all of Sheboygan.——At the annual meeting of the Milwaukee Medical Society Dr Gustav J Kaumheimer was elected president, Dr George A. Carhart, secretary, and Dr Robert C Brown, treasurer.——The Fox River Valley Medical Association at its annual meeting, held in Green Bay, elected Dr Walter R Hicks, Menominee, Mich president, Drs Richard C Buchanan, Green Bay, and Daniel H Gregory, West De Pere, vice presidents, and Dr Henry P Rhode, Green Bay, secretary treasurer.——The newly elected officers of the Ashland County Medical Society are as follows Dr, Otto Braun, president, Dr John V Wenzel, vice president, and Dr John M Dodd, secretary treasurer all of Ashland.——At a meeting of the Calumet County Medical Society, at Hilbert, Dr George P McKinney, Stockbridge, was elected president, Dr Claude G Greengo, Chilton, vice president, Dr L Rock Sleyster, Kiel, secretary treasurer (re elected), Dr Isaac N McComb, Brillion, delegate to the state society and Dr Ernest L Bolton, Chilton, alternate and censor The secretary reports that every physician practicing medicine in the county is either a member or has applied for membership

GENERAL

Women Study Care of the Insane.—The International Guild for the Benefit of the Insane will hold meetings in Washington, March 30, in New York in August and in Newport in September Further information may be obtained from the president, Dr Bertha A Rosenfeld, 257 East Seventy first Street, New York City

National Tuberculosis Association to Meet.—The third annual meeting of the National Association for the Study and Prevention of Tuberculosis will be held at the New Willard Hotel, Washington, D C, May 6 8 The organization of the sections for the meeting is as follows

SOCIOLOGIC SECTION Mr Paul Kennaday New York, chairman Mr Christopher Easton N Y secretary
CLINICAL AND CLIMATOLOGIC SECTION Dr George Dock Ann Arbor chairman Dr Joseph Walsh, Philadelphia, secretary
PATHOLOGIC AND BACTERIOLOGIC SECTION Dr F F Wesbrook Minneapolis chairman
SURGICAL SECTION Dr W S Halsted, Baltimore, chairman Dr Hugh H Young Baltimore secretary
SECTION ON TUBERCULOSIS IN CHILDREN Dr T M Rotch, Boston chairman

Army Medical Corps Examinations.—Preliminary examinations for assistant surgeons in the Army will be held April 29 and July 29 The Surgeon General, U S Army, Washington, D C, will send full information The applicant must be a citizen of the United States, between 22 and 30 years of age, a graduate of a reputable medical school, of good moral character and habits, and shall have had at least one year's hospital training or its equivalent in practice. The examinations will be held concurrently throughout the country at points to be named later, where boards can be convened Due consideration will be given to the localities from which applications are received, in order to lessen the traveling expenses of applicants as much as possible Applications must be completed by April 1 There are at present twenty five vacancies in the Medical Corps of the Army

Charity Organizations and Tuberculosis.—The importance of tuberculosis in charity problems is indicated by the report of the Charity Organization Society of the City of New York, about 50 pages of which are occupied by the report of the committee on the prevention of tuberculosis This report is divided into two sections, the first relating to educational work which has been carried on by the usual methods of exhibitions, lectures and the distributions of printed leaflets and cards Of the so called "Don't Cards" issued by the committee 243 000 were distributed during the year In relief work the committee made the experiment of sending favorable cases of incipient tuberculosis from New York into the country for the summer The expense was an average of $77 39 per patient at a rate of $6 59 per week. The results were most satisfactory The total cases improved or in which the disease was arrested amounted to 76 per cent. The country treatment of cases of *tuberculosis referred from the city ought to be of special interest to country physicians and offers an opportunity to give great aid in the fight against tuberculosis*

Public Health Surgeons Wanted.—The Treasury Department announces that an examination will be held at 3 B Street SE., Washington, D C, April 15, at 10 a m, to examine candidates for assistant surgeonships in the U S Public Health and Marine-Hospital Service. Candidates must be between 22 and 30 years of age, graduates of a reputable medical college, and free from any ailment which would disqualify them for service in any climate The written examination covers the various branches of medicine, surgery and hygiene The oral examination covers preliminary education, history, literature and natural sciences The clinical examination is conducted at a hospital, and when practicable, candidates are required to perform surgical operations on a cadaver Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur On appointment they are, as a rule, first assigned to duty at one of the large hospitals, as at Boston, New York, New Orleans, Chicago or San Francisco After five years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon Promotion to the grade of surgeon is made according to seniority, and after due examination as vacancies occur in that grade Assistant surgeons receive $1 600, passed assistant surgeons $2,000, and surgeons $2,500 a year When quarters are not provided, commutation at the rate of $30, $40 and $50 a month, according to grade, is allowed The tenure of office is permanent For further information address the Surgeon General, Public Health and Marine-Hospital Service, Washington, D C

CANADA

Hospital Notes.—A deputation from Selkirk, Man, recently waited on the premier of Manitoba to request a grant of $2,500 toward a hospital proposed to be erected in Selkirk, and to cost from $12 000 to $15 000.——Notre Dame Hospital Montreal, has recently been the recipent of several handsome subscriptions These total $239 000, of which Senator Forget of Montreal gave $200,000 The work of constructing a new hospital building has been commenced.——Dr McInnis, M P P for Brandon, Man, has secured $15 000 over and above grants from municipalities, for a tuberculosis sanatorium for the Province of Manitoba.——The Vancouver General Hospital treated more patients in December, 1906, than in any other previous month The total of hospital days was 3,400 representing an average of more than 100 patients in residence every day of the month, and being double the number for the same month last year

Trypanosomiasis in Canada.—The new professor of biology at Quebec, A Loir who was assistant to Pasteur at one time, has recently published a communication on trypanosomiasis in Canada Strict regulations have been enacted in Alberta against dourine, the trypanosome affection of horses, introduced some two years ago, and a laboratory for study of the disease has recently been installed there Loir spent some time last fall at this laboratory, but neither he nor any of the others interested were able to discover the causal trypanosome in the horses, but Watson one of the workers succeeded in finding a trypanosome in the blood of wild rabbits in Alberta. In *Loir's* communication to the *Jour de Méd et de Chir*, II, 33, 1907, he states that this is the first time that a trypanosome has been found in a mammal in a cold country Experiments under way seem to indicate that trypanosomes are able to retain their virulence a long time at very low temperatures He discusses whether the trypanosomiasis of the rabbits has any connection with the dourine of the horses The rabbits may eat the dejecta of the horses which generally run wild in that region for most of the year He adds that a special fatal disease among rabbits is known in Alberta which seems to recur every six or seven years possibly Watson's trypano some may have something to do with it

An Energetic Canadian Medical Society.—The report of the meeting of the French Medical Society at Joliette Que., December 10, states that through the efforts of the society a notorious quack has been fined $100 and costs with the alternative of 130 days in jail, while suits have been brought against two other quacks The society has unanimously adopted the $5 fee for insurance examinations and for life insurance companies, with $2 for lodges and the like and it was stated at the meeting that very few if any physicians will accept smaller fees in the districts of Wolfe Si Be Chicoutimi Terrebonne Portneuf Lac St and Joliette The Athabaska Medical

for postponing the discussion of the fee question and regret expressed in regard to its discordant note in the general chorus of concerted action Dr Laurendeau remarked that he hoped the sister society would reconsider its action, not so much on account of the money question, but because it is a matter of principle and above all of dignity Dr Lippe related a talk with an insurance agent and stated that he told him that all examinations were worth $5 but that for the mutual benefit societies, lodges, etc., the fees were reduced as a matter of charity A passage from a Three Rivers daily paper was read stating the arrival of a Dr E Lebel of Quebec who had come to the place at the request of the Canada Life Insurance Company to make examinations as the local physicians refused to make them at the new $3 rate Dr Laurendeau remarked that if the Quebec physician goes to Three Rivers again for this purpose, scorning medical ethics, the Quebec Medical Society will be asked to make an effort to educate the physicians of that region in the principles of solidarity and the benefits of concerted action Hitherto the Quebec Medical Society has paid no attention to the insurance fee question, but, he added, when one of its members goes elsewhere to carry out his ideas in defiance of the prevailing usage of the place, it is time to call attention to the fact A resolution was adopted providing that a circular letter be sent to all the physicians of the Joliette district, asking each to give his views on the fee question A similar letter has been sent out by the medical society at Three Rivers The Joliette society further took up the matter of "patent medicines," and a committee was appointed to confer with the member of parliament from the district and to inform him in regard to the views of the society on the question of having the formulas of "patent medicines" printed on the circular accompanying the article Copies of the resolution urging the passage of the bill to this effect now in the legislature are to be sent to all the medical societies of the province The *Journal de Med et de Chir*, for January 12, contains the detailed report of the secretary, A. Laurendeau

FOREIGN

Italian Congress of Ophthalmology—The next congress will meet at Parma in October Further particulars can be learned from Professor Gallenga of Parma

Polish Medical Congress—The tenth Congress of Polish Physicians and Scientists will be held at Lemberg in Austrian Poland, July 22 25, 1907 Dr F E Fronczak, 806 Filmore Avenue, Buffalo, N Y, is the representative in this country

Foreign Members of French Surgical Society—The Société de Chirurgie has elected Dudley Tait of San Francisco, J Israel of Berlin, Psaltoff of Smyrna, and Giordano of Venice, foreign correspondents while Mayo Robson of London was elected foreign associate

Women Medical Students in Switzerland—Switzerland has 5 universities with a total of 2,102 medical students this year Of this number, 1,171 are women, but only 31 are natives of the country These figures show an increase over last year when the total number of students was 1,799, including 993 women

Leprosy in Africa—The *British Medical Journal* states that leprosy is increasing in British Guiana, though segregation is enforced as much as possible A new ordinance provides that wandering lepers and those who can not be properly cared for and isolated in their own homes shall be sent to the leper hospital, which is also capable of being used as a prison or lunatic asylum should any criminal or insane person be found suffering from the disease All cases of leprosy must be reported by physicians, and various trades are forbidden to lepers

Germany Discards Greek and Latin as Preliminary for Medical Course.—The authorities in Germany have announced that graduates from the high schools which do not include Latin or Greek in the curricula can matriculate in the medical department of the universities without passing any examination in Latin or Greek. At their first medical examination however, they will have to pass an examination in Latin showing sufficient knowledge of the language to understand scientific terms The law and theology departments still retain the classical standard as preliminary to matriculation

Death of Organizer of the German Imperial Office for Compulsory Insurance of Wage-Earners—The death of Dr T Bödiker is announced from Berlin the organizer and former president of the state department which introduced and manages the insurance of workmen against illness, accident, old age and permanent earning incapacity This stupendous scheme is ascribed to Bismarck who devised it to side track socialist agitation and placed the working out of the scheme in the hands of Bödiker He accomplished the task with rare skill, having absolutely no precedents to go by Honorary degrees of medicine, law and philosophy were conferred on him by various universities, and our exchanges comment on his work as entitling him to lasting honor, especially in medical circles He died February 4, aged 63

Death from Drinking a Solution of Potassium Chlorate—The Swiss courts recently condemned a military surgeon to a month's imprisonment on account of the death of a soldier in his charge from the consequences of drinking a solution of potassium chlorate which had been given him for a gargle Evidence was presented that the physician had expressly stated to the patient and to the under sanitary officer attending him that the solution was for a gargle, but the sanitary officer alleged that he did not know what a "gargle" meant, and had allowed the soldier to drink the fluid A military court of appeals took the matter up and the sentence was reversed and the physician honorably discharged The *Allg med Ct Ztg*, in commenting on the affair remarks that it will certainly banish potassium chlorate from the medicine chest of the Swiss army medical officers to make way for some gargle that will not prove deadly if swallowed

Accidents of Serotherapy—Under this heading Novaes discusses in the *Tribuna Medica* of Rio de Janeiro for Dec. 1, 1906, the recent death of Dr F Fajardo, chief of the Bacteriologic Institute at Rio, president of the Academia Nacional de Medicina, who died shortly after a preventive injection of anti plague serum as already mentioned He explained his symptoms and collapse with the simple statement "Accidents of serotherapy," and added "Give me an injection of caffein, keep up artificial respiration and rub my body" A few minutes later he added "I am going to die It is useless" Novaes reviews the rare similar cases of accidents from serotherapy on record, remarking that "in the prevailing bacteriolatry only series of successful cases are published," adding that Fajardo's epitaph might be Seneca's saying "Man does not die, he kills himself" Fajardo's works on tropical medicine were numerous and well known, both in Europe and America

Unique Memorial to Hanot.—A special issue of the *Archives Gén de Médecine*, January, 1907, is devoted to the life-work of the Paris physician, V Hanot, who died ten years ago, and who, for a number of years was editor of the *Archives* After a brief biographical sketch, the complete list of his works is published, each one, with a few exceptions, followed by a summary of the principal points in the work The list, with the summaries, thus fills over 90 pages, as 207 original works and monographs are reviewed, with 17 critical reviews or compilations of lectures, and 29 published clinical lectures with 15 monographs published by his pupils under his direction Hanot's name is principally connected with affections of the liver—he is said to have "renovated, recast in a new mold and recreated the pathology of the liver"—but his imprint was left on many other branches of medicine A bronze portrait tablet was unveiled at the Hôpital Saint Antoine last fall, as was mentioned in these columns at the time

Two Festschrifts for Olof Hammarsten of Upsala.—The pupils and friends of Professor Hammarsten have presented him with a volume of 670 pages as a souvenir of his sixty fifth birthday, August 21 It contains 22 articles from the pen of various Danish Swedish, Norwegian and Finnish physicians, written in German, French or English Santesson relates research on the local action of cocain and of stovain on the peripheral nerve trunks, Hedin on the influence of acids and alkalies on the autolysis of organs, Hasselbach on the action of light on the binding of oxygen in the blood, O Folin of Waverly, Mass, describes the chemistry and biochemistry of kreatin, and I Bang of Lund relates the excellent results obtained with centrifugation in quantitative analysis The Physiologic Institute at Helsingfors has also issued a *Festscrift* in honor of Hammarsten, which appears as volume xviii of the *Archiv f Physiologie* Hammarsten has been professor of medical and physiologic chemistry at Upsala since 1860, and has published numerous articles and text books on his specialty

General Conference of the Practitioners of France—About the middle of April a congress is to be held at Paris for discussion of reform in the present modes of medical education in France and also to promote the free choice of the physician by policy holders in insurance societies, etc., and to devise ways and means for postgraduate instruction Delegates from more than a hundred different scientific and professional medical associations and private individuals are to confer at this *Assemblée nationale des médecins de France* Huchard Lereboullet and Revmond belong to the committee on organization as also the presidents of the various medical syndicates and

federations, and other prominent physicians The French people are very conservative in certain lines, and especially in the matter of medical instruction The universities and their medical departments are still managed in great part as when first founded, not conforming to the progress of science and general education One of the tasks proposed by the congress is to compile a list of the true practitioners, outside of the bureaucracy of the universities, and to insist that proposed reforms should be submitted to a representative body chosen among them rather than invariably from the reactionary university circles as in the past The program of the congress states that reform is urgently needed in the existing abstract, theoretical, encyclopedic methods of teaching medicine, apart from life and from reality It adds, "Every one knows that none of our masters has received an education comparable to that of his pupils"

LONDON LETTER

(From Our Regular Correspondent)

LONDON, Feb 9, 1907

Research in Tropical Medicine

The great progress in tropical medicine made by Great Britain in recent years, though in the main due to private enterprise, has lately received considerable assistance from the government. In July, 1904, the secretary of state for the colonies appointed an advisory committee for the tropical diseases research fund, to which the imperial government, the government of India, and many colonial governments, and the Rhodes trustees contribute The report of this committee has just been issued. The revenue for 1906 was $15,000 which consisted of contributions from colonial governments, $9,000, from the imperial government and the government of India, $2,500 each, from the Rhodes trustees, $1,000 The London School of Tropical Medicine received $5,000, which is to be devoted to the salaries of a combined teacher and investigator of protozoölogy, and a combined teacher and investigator of helminthology, and to the provision of laboratories The Liverpool School of Tropical Medicine received $2,500 for the salaries of a lecturer in economic entomology and parasitology and a lecturer in tropical medicine, both lecturers being required to devote their spare time to research In April, 1906, the colonial secretary sent a circular letter to the governors of the colonies insisting on the necessity for scientific research by specially trained officers in tropical colonies A step has already been taken in this direction by the establishment of a research institute in the Federated Malay States, and by the creation of bacteriologic posts in Hong Kong, the Straits Settlements, Ceylon, Mauritius, and British Guiana But the secretary considers these appointments insignificant in number compared to the work to be done As a difficulty has been experienced in filling them, he suggests that in a colony which has an adequate medical staff and is in a position to vote funds for scientific purposes, a sum might be devoted for detailing one or more of its medical officers to study the latest phases of modern scientific research in the best known centers

Tetanus Due to Anti-Plague Inoculations in the Punjab in 1902

The investigations into this catastrophe have only just been published and the report is a most elaborate one The accident was confined to a particular bottle and to the use of a particular syringe. The syringe used on the 19 persons was rinsed out with carbolic lotion after the inculpated bottle had been emptied Afterwards other people were inoculated without ill results from other bottles Experiments showed that a syringe into which a tetanus culture, grown in a bottle of prophylactic even for a few days, has been drawn, becomes grossly contaminated It follows that the prophylactic in the incriminated bottle could not have contained a developed tetanus culture, as the persons injected showed only the symptoms of an ordinary average case, not an acute or virulent one The bottle was recovered and examined fifteen days after the accident, and instead of the rich toxic culture referred to above, contained only a poor culture of reduced toxicity The contamination appears to have been due to opening the bottle with a forceps that had been dropped on the ground and which was not sterilized before being applied to the bottle No pains were spared in making the investigation, as not only was a commission appointed in India, but it was also referred to the Lister Institute of London

Milk Supply of Great Britain.

The cities and towns of Great Britain are becoming more and more alive to the fact that their milk supply is susceptible of great improvement in many particulars Transportation, distribution, and the character of many of the stores at which milk is retailed, are alike said to be inadequate and defective. Many municipalities have established milk depots at which poor persons can procure sterilized milk for the nourishment of young children and infants Such depots are stated to have done good work, and to have been the means of checking, to some extent, the appalling infant mortality which prevails in almost all large British towns London is probably the worst served city of Great Britain, so far as the milk supply is concerned. There is also a far smaller number of municipal depots in proportion to its population, than are present in other large British cities As the law now stands it is not legal to establish depots in Great Britain for the supply of sterilized milk for infants It has been announced recently that a bill is to be introduced into parliament to legalize their establishment. This rumor has aroused the medical profession, who voiced the general opinion on the subject through Sir Thomas Barlow This physician said that sterilization is only a second best process, once the milk is sterilized it is no longer possible to testify as to the goodness of the source of supply Children fed on sterilized milk develop scurvy and rickets Experience shows that if fresh milk is cooled immediately after it is drawn, and put into vessels properly sterilized, and kept cool in transit, the problem is solved It is argued that a municipal depot should not be an institution for the distribution of sterilized milk, but one for the distribution of clean fresh milk In Glasgow, the farmers supplying the milk depot are required to comply with certain stringent sanitary regulations It may be stated with emphasis that most cities of America are far in advance of British cities in regard to the milk supply The medical profession and general public of Great Britain are commencing to recognize this fact, and it will not be long before steps are taken to remedy the existing conditions The *Lancet* is taking up the question, and articles published January 19 and 26 on the manner in which milk is retailed in small general provision stores in London, have attracted considerable attention.

Death of a Signalman in His Box. A Question of Professional Secrecy

A dramatic interruption of the service of the Lancashire and Yorkshire Railway occurred near Blackburn Passenger trains going both ways found themselves held up by danger signals from a certain signal box, while the neighboring boxes reported the track clear An inspector on going to the box in question found the signalman on the floor, leaning against his levers, dead. The entries in his book showed that he had been doing his duty twenty minutes before he collapsed He is said to have suffered from heart disease, a question which will no doubt be settled at the inquest Curiously a short time before this fatality, the following point was raised in the *British Medical Journal* and its bearing on the case reported above is not lost sight of by the lay press A physician was attending a railway signalman who suffered from asthma The attacks come on suddenly and are so severe that the patient falls on the ground struggling for breath He has not yet had an attack in his signal box where he is on duty alone, sometimes for many hours He declines to inform the railway company of his illness, thinking this would lead to his discharge The physician is afraid that if he reports the case to the railway company an action for damages will be brought against him by the patient On the other hand, he fears that if he does not break the seal of professional secrecy there will probably be a railroad accident Commenting on the case the *British Medical Journal* says that the circumstances extreme though they be, can not be held to justify a breach of professional secrecy

The Decline of Homeopathy

Dr G Burford, in the *Monthly Homeopathic Review*, takes a despondent view of homeopathy in Great Britain Eight homeopathic pharmacies have closed their doors within the last few years in London and in the provinces a similar condition exists Ten years ago there were 205 physicians in the Homeopathic Society, to day there are only 190 "In the earlier days of homeopathy converts were not infrequent among professional men in good practice. Of late years this method of accession to the homeopathic ranks has fallen into desuetude" The reason given by Dr Burford is that 'the introduction of antiseptic surgery' has saved the "allopathic' situation Recognizing the "importance of the crisis" the British Homeopathic Association has drawn up a plan of All the homeopathic bodies in the country are ed and the machinery of education created "thy is to be founded and professors are t energetically this campaign may be to meet with any success The tific medicine in Great Britain is

Increase of Drinking Among Women in Great Britain.

Much alarm has been expressed of late in regard to the great increase of drinking among women in Great Britain. Dr Brathwaite, inspector under the British Inebriates Act, has recently issued his annual report and no part of it is more alarming than that which refers to women inebriates The report states that women under detention for drinking in British reformatories are far more numerous than male delinquents, outnumbering the men in the proportion of nearly eight to one It is also stated in the report of the registrar general of Great Britain, that while in the years 1880 1900 the death rate from intemperance taking the ratio per million of the population, increased 87 per cent. among men, among women it increased 180 per cent

Sleeping Sickness in Uganda

The government of Uganda is making vigorous efforts to deal with the difficult and alarming problem of sleeping sickness All persons suffering from it are being removed from the fly infested districts along the lake shore and placed in special camps or settlements inland under medical care. The disease seems to be decreasing but the mortality is still very great. It is proposed to create ten settlements, each providing accommodation for 1,000 sufferers and their families It is estimated that the expense will amount to $150,000 Even persons who do not so far show signs of infection are being removed from the lake shore to inland districts free from tsetse flies All vegetation capable of harboring the tsetse fly is being removed and the measures already taken are so effectual that a single fly can not now be found in Entebbe

Five Million Dollars for London Poor

Mr Whitely, the London shopkeeper who recently died under tragic circumstances, has bequeathed a large portion of his estate for charitable purposes Nine London hospitals have benefited by substantial legacies and the sum of $5,000,000 has been left to found, provide and maintain homes for the aged poor

VIENNA LETTER.

(From Our Regular Correspondent)

VIENNA, Jan 30, 1907

The Crusade Against Spitting

The spitting nuisance has assumed such proportions that the authorities have been forced to comply with the long expressed wishes of the profession and renew the old regulations against public spitting The railway companies, tram car and bus companies and the proprietors of all public conveyances have received strict orders from the health department of the interior to place in all compartments and carriages notices forbidding spitting on the floor In certain of the health resorts especially the scattered climatic resorts, the police have strict orders to arrest anyone found spitting on the floor or on the ground In the hospitals all patients are taught to avoid spitting and are urged to exert their influence among their friends against the custom The Vienna Society for the Care of the Phthisical (Tuberkulosefürsorge) is most active in this respect.

Free Meals for School Children

A committee has been formed having for its object the distribution of free meals to school children As the funds are at present small, the number of recipients is naturally limited Those parents who can afford to pay a small sum for the daily feeding of their children will be asked to do so, and thus enable the other children to be fed gratuitously As the food supplied by the society is much superior in quality to that obtained otherwise by the children of the poor it is expected that many parents will avail themselves of this opportunity of securing good meals for their children

Successful Transplantation of the Cornea.

Dr Zirm of Olmütz reports what he thinks is probably the first successful implantation of a part of the cornea By accident, a man had both his eyes made useless the cornea becoming opaque whitish gray, and consisting only of scar tissue Dr Zirm happened to come across a boy of 11 years of age at the same time, whose eye had to be enucleated on account of injury from an iron splinter Part of the cornea from the boy's eye was transplanted to the eyes of the man After ten days the right eye became painful and the transplanted piece had to be removed In the left eye however, the transplantation was a complete success The new cornea, as it appears four teen months after the operation is absolutely clear and transparent, and enables the man to do his work.

Pharmacology

NEW AND NON-OFFICIAL REMEDIES

The Preliminary List of Approved Articles Now Ready for Distribution.

To assist those who desire to co operate with the Council on Pharmacy and Chemistry in any way, and who thus need to know what preparations have been approved, at least tentatively, the list of the names of the articles, brought up to date, appears in the advertising pages of the first issue of THE JOURNAL of each month On advertising page 24 of this issue will be found such a list To facilitate criticism and correction of errors a reprint has been issued containing the names and descriptions of all the preparations thus far provisionally approved The brochure names and describes about 230 articles, making a pamphlet of 112 pages. A copy will be sent to any one on receipt of 6 cents in stamps

PHARMACOPEIA CHANGES

Corrections and Modifications Announced in Drug Standards of the U S Pharmacopeia.

We are informed by the Committee of Revision that on account of the passage of the Food and Drugs Act and on account of information which has been furnished to the Committee of Revision, certain changes, listed below, have been made in drug standards in the U S Pharmacopeia, eighth revision These changes, which are comparatively slight, will not materially affect the doses of the fluidextracts and tinctures of the drugs It will, however, enable manufacturing pharmacists and others to make the preparations to comply with the requirements of the Pharmacopeia, and they can now be held accountable under the law if these standards are not upheld The changes are

BELLADONNA LEAF *now* 0 3 per cent. mydriatic alkaloids.
BELLADONNA ROOT *now* 0 45 per cent. mydriatic alkaloids
COLCHICUM SEED *now* 0 45 per cent. of colchicine.
IPECAC *now* 1 75 per cent. of ipecac alkaloids
STRAMONIUM *now* 0 25 per cent. of mydriatic alkaloids
FLUIDEXTRACT OF BELLADONNA ROOT *now* 0 4 Gm alkaloids in 100 Cc.
TINCTURE OF BELLADONNA LEAF *now* 0 3 Gm. alkaloids in 100 Cc.
FLUIDEXTRACT OF COLCHICUM SEED *now* 0 4 Gm alkaloid in 100 Cc.
TINCTURE OF COLCHICUM SEED *now* 0 04 Gm alkaloid in 100 Cc.
FLUIDEXTRACT OF IPECAC *now* 1 5 Gm alkaloids in 100 Cc
FLUIDEXTRACT OF STRAMONIUM *now* 0 25 Gm alkaloids in 100 Cc.
EXTRACT OF STRAMONIUM *now* 1 0 per cent. alkaloids
TINCTURE OF STRAMONIUM now 0 025 Gm alkaloids in 100 Cc.
JALAP ROOT *now* 7 per cent. of total resin.
Under the article PETROLATUM page 336 U S P, last paragraph the sulphuric acid test has been dropped

Orangeine and Its Methods of Advertising

The Food and Drugs Act has resulted in peculiar developments in regard to certain "patent" and proprietary medicines, some of which would be amusing if it were not for the tragedy side *Orangeine is a widely advertised "patent medicine" of* the acetanilid order As will be remembered, it was one of the nostrums shown up in the official report of the Council on Pharmacy and Chemistry, published in THE JOURNAL A M A., June 3, 1905, the others being Sal Codein (Bell), Antikamnia, Ammonol, Phenalgin, and Koehler's Headache Powders We have already shown how the owners of one of these frauds have changed the composition of their product, substituting phenacetin rather than acknowledge that they had been using acetanilid Incidentally, it is interesting to notice that the formula of orangeine, now made open to the public by the Federal law, agrees almost exactly with the report published by the Council on Pharmacy and Chemistry The published formula is 2 4 grains of acetanilid and a grain of bicarbonate of soda in a five grain powder This would be approximately 46 and 20 per cent., respectively The Council's analyses showed 43 and 18 per cent., although, as stated at the time, the percentage of acetanilid published was the lowest found by any of the chemists engaged in making the analyses

But that is another story What we want to call attention to at this time is the brazen effrontery with which the orange-

ine people are using in their advertisements a sentence from a letter from Dr Wiley Here is the sentence

"We are well conversant with the fact that Acetanilid, when properly used, is a most valuable remedy, but its indiscriminate use in the hands of the laity undoubtedly does great harm in many cases"

Those who know Dr Wiley know that he looks on these acetanilid mixtures as among the most dangerous "patent medicines" on the market, and on orangeine as a typical example of the dangerous ones Dr Wiley appreciates, and so do others who know anything about the subject, that the rest of the stuff in the mixture called orangeine—and, for that matter, in all the acetanilid mixtures, whether "patent medicines" or those exploited as "ethical proprietaries"—is both harmless and useless It is simply a blind to humbug and mislead the public

Death from Koehler's Headache Powders—Dr P Loewenthal, New York City, reports the death of a man in an hour and a half after taking two of Koehler's headache powders The coroner's jury returned the following verdict

The said James Tobias came to his death on the 2d day of September 1906 at 1187 Lexington avenue by acetanilid poisoning administered at the time and place aforesaid in Koehler's headache powders purchased at drug store of P Jaffe 1133 Lexington ave

Chemist C P O'Conner made an analysis of a sample powder and reported it to be "made up of acetanilid"

The analysis of this nostrum, made under the direction of the Council on Pharmacy and Chemistry, was published in THE JOURNAL, June 3, 1905, page 1791 According to this analysis, Koehler's headache powders contain approximately: Acetanilid 76 per cent, and caffein 22 per cent

Death from Chamberlain's Colic, Cholera and Diarrhea Remedy

Dr W C Fulkerson, Marshall, Okla, reports a death from Chamberlain's Colic, Cholera and Diarrhea Remedy self administered He states that according to the formula, which is now published under the Food and Drugs Act, the remedy contains 6 grains of opium to the ounce

"An Impudent Instruction."

It is a pleasure to quote the following, from the *Humboldt Times* (Eureka, Cal), as another evidence that the "patent medicine" men have not their grip on all the newspapers of the country

"Since the time of the legislature's convening the manufacturers of proprietary medicines have flooded the mails addressed to the newspapers of California with appeals to 'use their influence' in connection with certain proposed legislation, affecting drugs, under consideration at Sacramento It is to be presumed that prepared editorials supporting the policies favored by the 'patent medicine' companies have been forwarded to some newspapers, for certain journals have recently appeared with editorials exactly in line with the arguments and appeals advanced by these interests

"The *Times* has not been altogether exempt from the approaches of these medicine makers, who evidently consider that their advertising patronage entitles them to dictate newspaper policy Most of the communications received have been simple requests, and have been ignored, but one medicine company has presumed too far, as the text following will show

"The *Times* does not know the merits of the arguments advanced by the medicine manufacturers, but it does know that the patronage of the medicine companies does not and will not influence the paper's policy, or in any manner affect the private or public actions of its management

"In this connection, the *Times* takes the liberty of setting forth a telegram which it received Wednesday, and the reply it forwarded, the same being as follows

LETTER BY THE "TIMES"

EUREKA CAL., Feb 13 1907

Miles Medicine Co Elkhart Ind

Gentlemen—I am this day in receipt of a telegram from you, reading as follows

> Senate Bill Thirty, similar to National Law satisfactory House Bill 531 has been amended by adding digitalis, nitroglycerin or other poisonous drug These bills have both passed and will be harmonized in conference. Use your influence with representatives and senator to support Senate Bill Thirty uniform with National Law"

In reply to the above telegram which I consider impudent and insolent in the extreme I will state that it is not the intention of the *Humboldt Times* or its management to have anything to do with attempts to influence the action of Humboldt County's legislators regarding patent medicine legislation. The *Times* believes that the Humboldt legislators will do in this matter, what to them appears advisable and proper in the public interest.

Several patent medicine companies have requested this office to exert its influence in connection with medical legislation. I have not deemed it necessary to reply to the same but your arrogant command calls for a reply and I deem this a proper and excellent time to advise you that under its present management the *Times* will frame its own policy and dictate its own action relative to public affairs in accordance with what it believes to be consonant with the public welfare.

If this reply seems to you an improper one if you are under the mistaken impression that your advertising patronage for which you are getting large returns, gives you the privilege of issuing orders to the management of this paper then you are respectfully advised to terminate your contract and withdraw your business from the *Times* This paper is anxious to carry a large volume of advertising but only on a strict, legitimate business basis. I might also notify you at this time that the *Times* intends to give its preference to the advertising business of Humboldt and Eureka business men.

I anticipate that you will be considerate enough to offer an apology for the offense you have given and I expect you will state in explanation that it is the habit of many editors and managers to take such orders as you unsuccessfully have attempted to issue to me I regretfully confess that perhaps the average newspapers are weak enough to encourage you in your bad habit but you will please consider that the *Times* is conducted on a higher plane of journalism Very respectfully WILL H FISCHER
Manager *Humboldt Times*"

Correspondence

"Starch Sugar as a Food Adulterant."

CHICAGO, Feb 19, 1907

To the Editor—In THE JOURNAL, January 26, appeared an article by Prof Henry Leffmann, entitled "Starch Sugar (Glucose and Grape Sugar) as a Food Adulterant" The statements contained therein are in many instances misleading and so out of accord with the facts as to call for a correction of at least the principal features Sulphuric acid is not employed in the manufacture of American glucose and grape sugar It is surprising that Professor Leffmann is not better informed on this point, particularly as information can easily be obtained This misstatement affords him the means of casting reflection on the wholesomeness of starch sugar and glucose, and makes it possible for him to cite the case of an extensive poisoning in England a few years ago by arsenical glucose, where the contamination by arsenic was due solely to the sulphuric acid employed in converting the starch material At the times of this arsenic poisoning, Dr Wiley conducted a thorough investigation and proved that American glucose could in no way be connected with this incident This was corroborated by Professor Chandler of Columbia College in his presidential address before the Society of Chemical Industry, at its London meeting Leffmann states that, "apart from some limited special applications, for which it is alone suitable, commercial glucose and grape sugar are almost entirely employed as adulterants and substitutes for natural carbohydrates" As regards the last part of this statement, it will not be disputed that a substitute may have the same food value as the material which it replaces This applies particularly to grape sugar and cane sugar, as the caloric units of both are practically the same

Let us now consider for a moment the principal uses to which glucose is put. The largest consumption of glucose or "corn syrup" is found in table syrups, glucose in this case being blended with cane syrup, refiners' syrup molasses or sorghum Such syrups are sold under their correct names, to wit "Corn syrup with cane flavor," "Corn syrup and molasses," "Corn syrup and sorghum," etc. It can not be said, therefore, that in this instance glucose is employed as an adulterant, nor is it employed as "a substitute for natural carbohydrates," for the sales of corn syrups outnumber those of cane syrups almost tenfold Glucose is also largely employed in candies When the United States committee on food standards prepared the standards for candies, special attention was given to glucose, and in the definition for candy, as finally adopted, the use of a saccharine substance was sanctioned Another large market for glucose is found in the preserve business the glucose in this case being employed not to lower the cost of the product, but to improve its quality As to the use of grape sugar in [illegible] products, wines produced in Missouri, Ohio, [illegible] states require the addition of some kind of grapes on account of the climatic conditi[illegible]

as much saccharine matter as in other more favored localities, as, for instance, California The preference is given to grape sugar over cane sugar, not because of the difference in price, but because of its superior merits As to grape sugar in beer, it is acknowledged that ale beers with keeping qualities can not be produced without the use of sugar, and again the preference is given to grape sugar

Leffmann directs his principal criticism towards the report rendered in 1884 by a committee appointed by the National Academy of Sciences for the purpose of making an investigation of the purity and wholesomeness of glucose This committee consisted of Professors Barker of the University of Pennsylvania, Brewer of Yale, Chandler of Columbia College, Gibbs of Harvard, and Remsen of Johns Hopkins, and it is reported that "starch sugar thus made and sent into commerce is of exceptional purity and uniformity of composition, and contains no injurious substances," and "though having at best only about two thirds the sweetening power of cane sugar, yet starch sugar is in no way inferior to cane sugar in healthfulness, there being no evidence before the committee that maize starch sugar, either in its normal condition or fermented, has any deleterious effect on the system, even when taken in large quantities" Leffmann finds fault with these investigations because they "were entirely insufficient according to modern standards of physiologic inquiry" He mitigates this rather severe criticism by stating "This does not reflect on the ability of the members of the committee. They proceeded according to the light available at that time" In answer thereto we may state that in 1894, ten years after the original investigation had been conducted, these same scientists went on record as entertaining the same views as in 1884, and that, if anything, their belief in glucose had been strengthened

Of expressions in favor of glucose of more recent date we may quote the following Dr William Murrell of England, in the *Medical Press and Circular*, May 1, 1901 "Commercial glucose is not only a food but a most excellent food" Dr Wiley stated at the times his testimony was taken before Senator Mason, in connection with the establishment of a national food law that "the series of foods, known as glucose or grape sugar, when properly made, are valuable food materials and not injurious" And again Dr Wiley at a meeting of the Philadelphia Retail Grocers' Association, Feb 15, 1900 "I am a friend of glucose and of every healthful food product"

To substantiate his criticism against glucose Dr Leffmann cites the "revelations brought about by the prosecutions recently undertaken by Dr Warren, dairy and food commissioner of Pennsylvania," according to which glucose was contaminated in many cases with appreciable amounts of sulphuric acid This statement is wholly erroneous The investigations of Dr Warren in Philadelphia showed a large amount of cheap candies to contain sulphites The presence of sulphites was attributed to the glucose employed in the preparation of these candies, although it was generally known that it was a common practice among some confectioners to use sulphite preparations in the manufacture of their candies, and this accounted for the relatively large amount of sulphites found It has never been denied that the brand of glucose, known as "Confectioners' glucose," which was sold to confectioners only, contained small amounts of sulphites but these were considered unobjectionable because the sulphurous acid was supposed to be given off entirely at the high temperatures employed in cooking candies The very moment the issue was raised the management of the Corn Products Refining company discontinued the manufacture of the sulphite-containing brand, so that every pound of glucose or grape sugar sold since for food purposes is absolutely free from this ingredient It is quite pertinent to state that there is not one case on record where the purity or wholesomeness of any of our corn syrups put up for table use was questioned, although millions of cans are sold every year throughout the country

It remains to reply to the allegation that the company had consented to pay all the numerous fines in Pennsylvania This statement is absolutely without foundation, the facts being that when the matter was presented to Attorney General Carson and Special Attorney McGibney who had been employed by Dr Warren, for the purpose of prosecuting these cases, they both advised Commissioner Warren that he should dismiss the 250 suits pending, which was done, as the records will show

We regret that the space allotted us does not permit of doing the subject full justice, yet we believe that from the foregoing it is evident that Professor Leffmann's statements do not appear entitled to serious consideration, as most of the data submitted by him are erroneous He has failed to submit any proof, scientific or otherwise, which would justify his demand that the use of glucose and grape sugar in foods be restricted On the other hand, we believe we have shown that the report made by the committee in 1884 is substantiated in every respect by later developments and investigations

CORN PRODUCTS REFINING COMPANY
(By T B Wagner Ph D)

The above letter was submitted to Dr Leffmann, who replies as follows

PHILADELPHIA, Feb 23, 1907

To the Editor —(*a*) All the literature that I have consulted mentions sulphuric acid as one of the principal agents in the making of glucose I am aware that other acids have been used The latest American work I have is Leach's "Food Inspection and Analysis" This states that "usually sulphuric acid" is employed It is important to note that Dr Wagner does not say what acid is used Why this omission? His assertion that chemists can easily find out what methods are used in manufacturing operations is not correct Chemists are usually denied admission, unless they are "orthodox" in their views of the sanitary relations of the products If hydrochloric, oxalic or sulphurous acid is used, the fundamental danger is not removed Each of these is a laboratory product and liable to impurities that do not occur in natural products Let Dr Wagner tell us what is used and then we can judge of the degree of danger

(*b*) The statement that American glucose does not involve danger from arsenical poisoning may be admitted, I think, without affecting the point I wished to make I referred to it to show that great harm had been done In view of the disaster it is likely that all glucose is, and will be for a long time, free from arsenic, but the discovery was not made by the chemists of the glucose makers, and many human beings were sacrificed to the "official" confidence and approval of glucose as a substitute for malt.

(*c*) I do not dispute that "a substitute may have the same food value as the material which it replaces," but before the makers and users of glucose can take advantage of this dictum they must show the fact. The comparison of calories means nothing Dextrin and cellulose have the same percentage composition as starch, but they do not have the same value as food for human beings Mushrooms and meat extracts contain considerable nitrogen, but it is now known that neither can be ranked as equal to a standard proteid diet, having the same nitrogen ratio A few weeks ago THE JOURNAL pointed out that a preparation of agar agar, widely advertised as a nutritious food, is about as nourishing as so much paper pulp, yet the calories of agar agar are probably nearly those of starch

(*d*) Dr Wagner admits my contention that starch sugar is principally employed as a substitute and adulterant of the natural carbohydrates He says "The largest consumption of glucose or corn syrup is found in table syrups" "Such syrups are sold under their correct names" Here is a monstrous misstatement. Dr Wagner gives some so called "correct names" Every one of them is deceptive, every one has been devised with the sole object of deceiving The term glucose has been largely discredited, the community is suspicious of it, the term "corn syrup" has been invented to conceal the real nature of the article The readers of THE JOURNAL are fully familiar with this trick They all know how acetanilid is concealed to the general public under the name "phenyl acetamid," or saccharin under the term, "benzoyl sulphimid" Dr Wagner says, "Glucose in this case being blended with cane syrup" I doubt very much if, with the stringent rulings now in force, under the new law, cane syrup and glucose could be considered "like" substances, to which alone the term "blend" can be applied Certainly, not if the principles

which have been suggested as applicable to blended whiskies are to be held in other cases

(e) The "official" admission of glucose as an ingredient of candy has no bearing on the case Candy is not a food in a strict sense, it is eaten for pleasure, not for nourishment The Washington authorities interpret the application of laws subject to revision by the courts, they do not decide fundamental points in science My argument is that glucose is not cane sugar, milk sugar, invert sugar, or predigested starch, and therefore is not a proper substitute for either of these

(f) I deny Dr Wagner's assertion that glucose is not used as a cheapening agent Such a statement is an insult to the understanding of men Similarly, the statement that the wine makers of certain regions prefer glucose to cane sugar for other reasons than economy, or that beer can not be properly made without glucose is unworthy of serious consideration The dominating factor in all ordinary uses of glucose is to secure greater profit to the manufacturer without informing the consumer of the substitution

"Its honor rooted in dishonor stands"

(g) In my opinion nothing that Dr Wagner says diminishes the force of my criticism of the report of 1884 It was a wholly insufficient investigation, and if it were published today for the first time, would be met by all sanitarians and biologists with condemnation That the framers of the report did twelve years ago say that they had seen no reason to change opinion is of no value in this issue No investigation of importance had been made None of them was in close touch with clinical medicine or physiologic investigation, and their later statement merely reflects the conclusions that they came to under the original insufficient investigation Dr Murrell's opinion is merely an opinion, its value can only be determined when we know the data on which he based it. Nor can Dr Wiley's statement be regarded as final The quotations given seem to be rather *obiter dicta* than formal opinions

(h) I regret that, by a typographic error, I was made to say that glucose was found to contain sulphuric acid It does, indeed, frequently contain sulphates, but I referred to sulphurous acid, and the context conforms to this It was widely stated in the Philadelphia newspapers that the glucose trust had offered to settle all the cases and withdraw the objectionable product I saw a letter from the office to this effect I do not understand that the cases were "dismissed" They were "settled," the costs being paid by the trust

The makers of this glucose knew that it contained sulphites, they knew that such compounds are foreign to natural foods, they knew or should have known that sulphites are harmful to the human system, and that heavy penalties had been imposed for the addition of these substances to meat products, yet they sold the adulterated article, widely, as of superior quality, without hesitation, supervision or notice

HENRY LEFFMANN

The letter to which Dr Leffmann refers is doubtless the following, which was written by the Philadelphia attorney representing the trust

Aug 20 1906

Hon B H Warren Dairy and Food Commissioner

Dear Sir —In reference to the cases recently brought by your department against various glucose houses, syrup manufacturers and manufacturing confectioners on the charge of selling food products containing sulphur dioxid I represent the Corn Products Refining Company of New York, manufacturers of the glucose used by all of the defendants referred to Since it was the glucose used by the said defendants that contained the sulphur dioxid which inspired the prosecutions my clients have assumed the onus of defending these cases.

As the result of a recent conference with the Corn Products Refining Company I am prepared to admit for my clients that the glucose up to this time manufactured by them does contain a minute quantity of sulphur dioxid and that under the Pennsylvania Food Law this fact renders their goods in violation of the Pennsylvania Act of 1895 under which all of the present cases are brought. I should like to say just here in their defense however and to emphasize this as deeply as I can that in using sulphur dioxid they have followed a practice which has marked the manufacture of glucose ever since the industry began The ingredient named is not used in any sense as an adulterant but to bleach the glucose to a color sufficiently white for confectioners use. The natural color of glucose is yellow which makes the manufacture of white candies difficult if not impossible

Now realizing that their goods as at present made are in violation of the Pennsylvania law my clients have already given orders to their various representatives to withdraw immediately all bleached glucose from the market not only the market in Pennsylvania, but also those in all other states and territories Hence forth they will make for the United States market only what is termed 'neutral' glucose that is to say glucose the color of which is natural light yellow This glucose contains no sulphur dioxid whatever It will not please manufacturing confectioners yet under existing circumstances, we have no alternative but to produce it.

In addition to withdrawing all illegal glucose from the market and replacing it with glucose fully in conformity with the law my clients will also assume the payment of all fines assessed against users of their glucose, where the prosecution pending against them springs from the presence of sulphur dioxid in their goods

A number of these cases have already been brought in Philadelphia. In most of them hearings were waived and the defendants held in bail In others the defendants were held in bail after the hearings I am greatly in hopes that you will see your way clear to dismiss these cases on payment of fines and costs as it has been the custom of your department to do My clients wish to dispose of the whole of this unpleasant situation as speedily as possible and since the department has fully attained its object of securing the removal of illegal goods from the market, there would seem to be no good reason for pushing the cases further

Further the returning of these cases to court would I respectfully submit serve no necessary purpose since the court after having made it plain that the Corn Products Refining Company had not used sulphur dioxid for any illegitimate purpose would scarcely impose more than the minimum penalty At the same time the carrying of the cases to the Quarter Sessions Court would entail on my clients additional costs and about $25 in each case This would seem a useless hardship since as I repeat the Dairy and Food Department has already won its campaign and attained its object.

In order that the matter may be settled and ended as speedily as possible I will ask you to let me have from the records of your department, a list of the sulphur dioxid cases already brought

ELTON J BUCKLEY

Dysenteric Outbreak Due to Colon Bacillus

WARREN PA Feb 12 1907

To the Editor —On Dec 8 1906 nearly 3 000 persons—approximately one third of the population of Warren—were attacked within a short time by severe vomiting, profuse watery bowel discharges and some prostration There was no fever, and most of the symptoms disappeared within 12 hours Warning was at once given to boil the water used for drinking, and those who obeyed had no further symptoms Others continued to suffer from attacks of diarrhea for a period of two weeks In no case did any typhoid fever develop

Analyses of the general water supply were made on December 8, and at frequent intervals thereafter, and the wells from which the public supply is obtained were found contaminated with sewage The *Bacillus coli communis* was found in every sample examined. These wells are 60 feet deep, but they are located in a very insanitary region near numerous outhouses and outlets of sewers, and on the banks of a river which frequently overflows

Analyses made at irregular intervals in the past few years always showed these wells to be very pure and it is believed that in some way surface washings contaminated them

Up to Jan 18 1907, the colon bacillus was found since then the water has not contained this organism, but the river has fallen several feet and there has been no rain

That the water was the cause of the epidemic is evidenced by the facts that only users of city water were affected No other community in a radius of 50 miles had any epidemic, persons who visited Warren and drank the water were attacked within 12 hours with the same malady The milk and food supply come from a dozen different sources and no one article of diet was generally used Analysis of the water failed to show the presence of any other pathologic germ but the colon bacillus The attack was similar in all cases and was more like an attack of cholera morbus than anything else

Are there epidemics of a like nature on record in which the colon bacillus is the offender?

Warren is free from typhoid fever, but in April, 1906, a similar epidemic, lasting a few days was noted The number of persons affected was not nearly so great It was attributed to the use of stagnant water from an emergency reservoir, but analyses of the water made at that time showed no evidence of sewage contamination M V BALL,

President, Board of Health

[This letter is referred to in the Editorial department of this issue —ED]

Shoemaker's "Materia Medica and Therapeutics."

PHILADELPHIA, Feb 20, 1907

To the Editor —While thanking you for your favorable notice of my "Materia Medica and Therapeutics," sixth edition, I would regard it as only just to me that a misconception on the part of the reviewer should be corrected, and I ask you to publish this explanation in an early issue of THE JOURNAL. Unlike other text-books, my work is based on both the United States Pharmacopeia and the British Pharmacopeia, so that it can be used in all parts of the world where these two standards are in force. Unfortunately, the committee of revision did not see its way clear to adopt the English titles of some drugs, like carbolic acid and sulphonal, but authorized "phenol," "hexamethylenamine," etc, instead A careful examination of my work will show that these drugs are described under both of their official titles, with full explanation given under each heading Unofficial new drugs, of course, are described under their proper names (and also trade names) with their chemical formulas appended Your reviewer's statement that "Unofficial preparations unfortunately are described under proprietary or trade names, regardless of the fact that some of them have been admitted to the Pharmacopeia under other names," is both contradictory and incorrect Of course, a preparation can not be unofficial and, at the same time, be included in the Pharmacopeia, while to imply that trade names are used without giving the Pharmacopeial equivalents is stating the reverse of the truth No confusion, for instance, can arise from the discussion of "carbolic acid" among the acids according to the British Pharmacopeia, when it is accompanied by the U S P title of "Phenol hydratum," and there is also a cross reference under "Phenol" in its place.

JOHN V SHOEMAKER

The Etiology of Rheumatism in Children.

MAYWOOD, ILL, Feb 16, 1907

To the Editor —Reading the theories, new and old, of the etiology of rheumatism in children in THE JOURNAL of recent date, reminds me of a patient under my care two years ago It was a typical case of croupous pneumonia in a boy of 7 The crisis was passed on the fifth day The second day following he developed rheumatic fever with swollen and extremely painful ankle and knee joints on the right side, which several days later shifted to the left side Under the usual treatment he made a good recovery This suggests the probability of the cause of the rheumatism as being *Diplococcus pneumoniæ* infection, and offers a field for research

O E MATTER, M.D

Book Notices

A TEXT BOOK OF DISEASES OF WOMEN By J C. Webster B A. M D F R C P E F R S E., Professor of Obstetrics and Gynecology in Rush Medical College in affiliation with the University of Chicago With 372 Illustrations and 10 Colored Plates Cloth. Pp 712 Price $7 00 Philadelphia W B Saunders Company 1907

It is a pleasure to review this excellent addition to American text books on gynecology The author has succeeded in adhering to the guiding principles which he formulates To give prominence to the scientific basis of each subject under consideration, including the results of research in anatomy, histology, embryology, comparative anatomy, pathology and bacteriology, to study clinical phenomena in their widest relationships, to insist on caution in the adoption of new and insufficiently tried therapeutic measures and to emphasize measures proved by his own experience As a general basis for the study of pathology and treatment he has necessarily devoted about one seventh of the book to a full and very carefully prepared description of the anatomy of the female organs This subject, well elucidated by 82 carefully selected illustrations, is presented in a chapter that gives a picture of the gross and microscopic structure, the development and the physiology that can hardly be excelled. Likewise the short chapter of ten pages on the genital tract in relation to microorganisms gives a well presented résumé of the bacteriolgy of the genital tract in various conditions and the relations of micro organisms to pelvic disease The chapter on puberty and menstruation, including the diseases of menstruation, is as satisfactory a presentation of this difficult subject as is perhaps possible in the present unsettled condition of our knowledge The author's treatment of neuroses in relation to pelvic disease in women, including hysteria and neurasthenia, together with his advice concerning the surgical treatment of chronic ovaritis and cystic degeneration of the ovaries in a later chapter will, perhaps, from some receive more criticism than anything else in the book Although Webster insists that operative treatment of neurasthenia should not be placed in the forefront of therapeutic measures, yet the conclusion that marked neuroses may be associated with cystic degeneration of the ovaries, with slight or absent pelvic symptoms because of reflex nervous disturbances from ovarian tension, or because of disturbance of ovarian secretion, and the statement that ovarian resection or removal has been frequently followed by a cure, will arouse opposition Professor Webster, however, is well trained in modern pathology, and when he enunciates his well known views on this subject he probably finds himself still able to defend them as he has done in the past The chapters on case taking and physical exercise and that on minor therapeutic measures are similar to those in other works Local massage is condemned Pessaries are described and in certain conditions advocated, but evidently without much predilection for them Surgical technic is described in great detail and is well illustrated. Only a most carefully trained operator with a highly sensitive "surgical conscience" could have produced this excellent description of abdominal and vaginal operations Considerable attention is given to the technic and the advantages of local anesthesia

The description of the various pathologic conditions found in the pelvic organs and their treatment is presented with as great degree of detail and completeness as is possible, considering the limits imposed by the size of the book It is impracticable as well as unnecessary in a review to attempt to give the views of the author on the different gynecologic problems of the present time To some of these problems Webster has made original contributions Others are discussed from a point of view of one familiar with all the literature of the day, and who himself has tested many of the therapeutic measures that have been advocated The result is a modern presentation of gynecology, differing, perhaps, not so much from that of others, but very satisfying to the reader because of the confidence he intuitively feels in the masterly handling of all the subjects It is this great excellence combined with the unusual thoroughness of the introductory chapters that will secure for this work a wide and admiring circle of readers

THERAPEUTISCHE TECHNIK FUER DIE AERZTLICHE PRAXIS By J Schwalbe. Erster Halbband Mit. 390 Abbildungen. Paper Pp 352. Leipsic Verlag von Georg Thieme, 1906

Therapeutics is acknowledged to be the first and most important task of the physician, and its recent developments have been largely in directions which demand a degree of technical knowledge and manual skill far in advance of that required when the physician's task was limited to the composition and writing of a compatible prescription Many of the recent advances are, to be sure, in the domain of specialists, but their importance is such that it is almost imperative that the general practitioner should be well acquainted with them if he is to do the best for his patients and not lose them unnecessarily to the specialist

The book before us is an attempt to furnish practicing physicians with an answer to the question what to do and how to do it. It is brought out under the general editorship of J Schwalbe, with the collaboration of a number of eminent German clinicians. It is devoted to the technic of therapeutics and gives in detail the various procedures with the method of application and indications for their use, and in certain cases a comparison of various methods with a statement of their relative advantages and contraindications The subjects treated in Vol 1 are Massage, gymnastics, the technic of mechanical hydrotherapy and thermotherapy, radiotherapy, preparation and application of medicines, surgical technic, and

the special treatment of the eye From the text and illustrations it is evident that the author believes that massage is worthy of application by the physician personally

In general, the methods prescribed comprise not only those requiring complicated apparatus and technic, but also those which the average practitioner may employ The book is well illustrated and it is to be hoped that it may be made accessible to a larger circle of readers by translation into English

ANIMAL MICROLOGY, Practical Exercises in Microscopical Methods By M. F Guyer Ph D Professor of Zoölogy in the University of Cincinnati. Cloth Pp 240 Price, $1 75 Chicago University of Chicago Press 1906

This book is designed especially for beginning students in microscopic work on animals, and describes in detail the various methods and technic of the elementary processes such as killing, hardening, preserving, staining, sectioning and mounting Several appendices deal with the theory of the microscope, the use of stains and reagents, collecting material for an elementary course in zoölogy, etc Directions for blood work and for bacteriologic technic as well as embryologic methods are given so that while the trend of the book is toward zoölogy proper, the medical student will find it very useful as a guide to microscopic work A feature for which the book is to be highly commended is the clearness of the directions which make it easy for the student to follow the methods It is well illustrated with pictures of instruments and apparatus

GENERAL MEDICINE Edited by F Billings M.S M D Head of the Medical Department and Dean of the Faculty of Rush Medical College Chicago and J H Salisbury M D Professor of Medicine Chicago Clinical School Practical Medicine Series comprising Ten Volumes on the Year s progress in Medicine and Surgery under the Editorial Charge of G P Head Professor of Laryngology and Rhinology Chicago Postgraduate Medical School Vol VI Series 1906 Cloth Pp 363 Chicago The Year Book Publishers

Nearly two thirds of this volume is devoted to diseases of the stomach and intestines Physiology, pathology, diagnosis and therapeutics serve as convenient heads under which is classified the large amount of new material from the recent literature The functional and organic diseases and motor neuroses of the stomach have been the subject of much study and numerous contributions to literature, which the authors have epitomized Typhoid fever is the subject of an important article, and malaria, yellow fever, dysentery and syphilis of the liver are among the topics discussed The volume contains much of value and will be appreciated by the student of modern medicine

A SHORT PRACTICE OF MEDICINE By Robert A. Fleming, M.A., M D F R C P D F R.S F Lecturer on Practice of Medicine, School of the Royal Colleges Edinburgh, etc. Cloth. Pp 748 Price, $4 20 net. Philadelphia P Blakiston s Son & Co 1906

This volume is especially intended as a handbook for the student while attending lectures, and may serve as a review for the general practitioner, but its limited size necessitates such brevity that it can hardly be regarded as alone a sufficient guide for the medical man. The methods of diagnosis are mentioned, but the details are not given As a student's manual the work is worthy of commendation

A SYLLABUS OF MATERIA MEDICA. Compiled by W Coleman M D Professor of Clinical Medicine and Instructor in Materia Medica and Therapeutics in Cornell University Medical College etc. Third edition revised to conform to the Eighth Decennial Revision of the U S. Pharmacopeia. Cloth Pp 186 Price $1 00 New York William Wood & Company

This little book has been revised to accord with the eighth revision of the U S Pharmacopeia, in a way to increase its usefulness to the medical student as a supplement to the regular text books on materia medica

JAHRESBERICHT Ueber die Fortschritte in der Lehre von den Pathogenen Mikroörganismen umfassend Bacterien Pilze und Protozoen By P von Baumgarten and F Tangl Zwanzigster Jahrgang 1904 Paper Pp 1106 Leipsic Verlag von S Hirzel 1906.

The authors present a complete review of all the 1906 publications—books and current literature—on parasites, both animal and vegetable, general microbiology and disinfection The book ought to be of great service to litterateurs and workers in pathology and bacteriology

Miscellany

CLIPPINGS FROM LAY EXCHANGES

DISEMBOWLED YET LIVED

Marysville J B , for twenty years the wonder of medical science, is dead Twenty years ago in a cutting affray B was entirely disembowled. His intestines fell out and were entirely buried in sawdust. Bystanders picked him up and stuffed them back several hours before medical aid arrived He recovered and later died a natural death —*Lima* (Ohio) *Gazette*, Aug 12, 1906

THE TRENDELENBURG POSTURE

Prof F Trendelenburg , inventor of the "Trendelenburg Posture," is visiting in this city The Trendelenburg Posture consists simply of posterior operations by means of a specially contrived operating table, that in cases of a peculiarly delicate character have been remarkably successful —Philadelphia *Public Ledger*, May 5, 1906

GOOD WORDS FROM THE EDITOR

was kicked by a colt in the field, sustaining a compound fracture of his left arm, the bones protruding and causing much loss of blood until Dr ——— came. The doctor has a large circle of patients, including J A., who has a disease of the lymphatic glands never seen here before and pronounced incurable by several physicians but now improving to the surprise of all, also Mr and Mrs P P, and is treating the case of Mrs M. A. L with great skill it having been a nervous derangement of the system subject to more sudden changes than the weather, and who is up around and gaining —*Belding* (Mich) *Banner*, June 21, 1906

LAY MEDICAL TERMS

"Dr I is affected with lutus bulgaric "—*Hastings* (Neb) *Tribune*, Aug 10, 1906 ——"Dr C assisted in vis cerating the right eye, "—*Pocahontas* (Iowa) *Democrat*, May 17, 1906 ——"Charles Le P died as a result of lamphigitis "—*Hampshire* (Mass) *Gazette* ——"Secretary H was prostrated by an attack of artremya at his summer home "—*Clinton* (Iowa) *Herald* —— "The causes of death are as follows manitition, phthisis pulmonutes, marosmus, "—*Mahanoy City* (Pa) *American* ——"General B died of intestinal nephritis "—*Scattle* (Wash) *Post Intelligencer* ——" in addition to hernia he is suffering from a water cancer "—*Middletown* (Conn) *Penny Press* ——"He is in good hands and suffering with an attack of empiric fever "—*Rockford* (Ill) *Republic* ——" spasm of the diaplerague resulting from the sneeze caused the vertebræ to snap "—*St Paul* (Minn) *Pioneer Press* ——"Mr ———'s death was due to sorosis of the liver "—*Pittsburg* (Pa) *Commercial Gazette* ——"Abijah L. had an operation Wednesday for achanoids "—*Windsor Locks* (Conn) *Journal* ——"Dr M W died suddenly of pleurisy of the brain."—*Cincinnati Enquirer* ——" he became ill in this city with pulmonary peritonitis "—*Cincinnati Inquirer* ——" , a four months old died of what is known among surgeons as 'faraman ovale' "—*Philadelphia Press*, Nov 26, 1906 ——" the fatal disease at Marfa has been diagnosed as 'Stopplococus,' an affection of the throat."—*Galveston* (Texas) *News*, Nov 11, 1906

Osteomalacia and Suprarenal Extract—Bossi had occasion to treat a woman in the eighth month of pregnancy in an advanced stage of osteomalacia. He conceived the idea that possibly the vasoconstricting power of suprarenal extract might modify the circulation through the uterus and ovaries and through the bone marrow Extirpation of the suprarenals in animals is known to have a marked modifying action on the ovaries He therefore gave the patient an injection of 0 005 gm (about 1 12 gr) of a 1 per thousand solution of suprarenal extract. It caused no disturbance, and the pain grew at once less intense, and the patient was able to sleep that night Seven injections were given in the course of 7 days, the improvement progressing so rapidly that the patient regarded it

as an actual miracle The bones were evidently in process of restitution, and the patient was clinically cured, entirely free from pain or other disturbances Bossi urges research on gravid animals to determine the influence on the bones of partial or total removal of the suprarenal capsules, adding that the results in this case were so prompt and so marvelous that hopes in regard to suprarenal treatment of osteomalacia are certainly justified.—*Policlinico*, xiv 2, 1907

Devices to Prevent Asphyxiation.—Among valuable first aid devices are the masks for protection against irrespirable gases and which enable divers, miners, firemen, etc., to penetrate safely places where life would be sacrificed without them According to the *Scientific American*, the masks are of two kinds One is provided with long tubing which supplies oxygen or air from a bellows manipulated by an assistant, the other is provided with a portable tank of compressed oxygen which is gradually supplied while the carbon dioxid formed is absorbed by passing the expired air over caustic soda, after which it is charged with oxygen and breathed over in this way again and again Where the noxious gas does not injure the eyes a mask can be fitted over the mouth and nose with an inlet tube for fresh air and an outlet with a valve which may open directly into the poisonous atmosphere Such an apparatus can be used only a short distance from the point where access to fresh air can be had For penetrating mines, etc, an apparatus provided with a supply of oxygen must be used The value of these devices in the rescue of miners overcome by poisonous "choke damp" is incalculable The rescuers can pass quickly and safely to the scene of disaster and bring the unconscious miners to the surface for resuscitation The supplementary supply of oxygen can be used by artificial respiration to hasten the process of resuscitation There may be in this application an opportunity for the extension of the use of such masks to the resuscitation of the drowned or those accidentally asphyxiated by illuminating gas

Unnecessary Vivisection.—"A case of cruel vivisection" says *American Medicine*, "was described at the recent meeting of the American Association for the Advancement of Science, by the experimenter, John B Watson, of the University of Chicago He subjected a rat to various operations, blinding it, extirpating the olfactory nerve freezing its feet and covering its head with collodion—all to find out whether it had a sixth sense which would enable it to escape from a complex cage Though a rat does not suffer as a man yet every neurotic person is thoroughly convinced that the pain sense in every animal is as acute as in himself Such useless cruelties, therefore give to the morbid antivivisectionists a real basis for their crusade The association should not have permitted this paper on its program and the cruel experiment should never have been made We are glad to see that Watson has been censured by several conservative lay journals, which have always defended vivisection done with the direct view of obtaining or proving important facts They very properly condemn experiments which can prove nothing The science of medicine is now advancing by leaps and bounds through what might be called vivisection and it is deplorable that any one should cast discredit on a necessity of modern existence We hope to hear of no further useless cruelty"

Cause of Fever After Splenectomy.—Herczel reports (*Wien Klin Wochschr* xx, 123 1907) the later history of 6 patients on whom he performed splenectomy between 1904 6 All were completely cured of their symptoms by the operation and have been in good health since In 2 cases the enlargement of the spleen was of malarial origin and was accompanied by ascites and anemia In another case a wandering spleen was enlarged with secondary anemia In another, the enlargement of the spleen was accompanied by hypertrophy of the liver, and in the fifth the trouble was an echinococcus cyst in the spleen He found that the febrile conditions sometimes observed after the operation were the result of aseptic necrosis of the fat tissue around the stump when the pedicle was ligated *en masse* Since he has made a practice of ligating the vessels in the hilus separately, close to the spleen, healing proceeds smoothly without tendency to rise of temperature.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION CONTRACT PRACTICE INSURANCE FEES MEDICAL LEGISLATION ETC

Secret Commissions Barred in Omaha.

At a recent meeting the Omaha (Douglas County), Nebr, Medical Society adopted the following rules

RULE 1.—Any member of this society who shall pay or offer to pay a commission for any case or shall accept or solicit a commission for sending a case shall be expelled from the society

RULE 2.—Any accusation that any member has been guilty of any of the offenses mentioned in Rule 1 shall be referred to the Board of Censors who if they deem the proof sufficient to warrant it shall summon the accused to appear before the society at its next regular meeting If the accused without good excuse shall fail to appear or if after hearing the evidence, the majority of those present shall decide that he is guilty his name shall forthwith be dropped from the society s rolls. In case the Board of Censors think the evidence insufficient to warrant bringing the accusation before the society the accuser shall have the right to introduce it at any regular meeting when it shall be acted on as if it had been reported by the Board of Censors

RULE 3.—Any member so expelled can not be reinstated for at least six months and if he should be reinstated and should a second time be found guilty of a similar offense, he can never again become a member of the society

It is further resolved that our delegates to the next Nebraska State Medical Society meeting be instructed to introduce and push a similar set of rules for the State Society with a recommendation that the matter be carried on to the American Medical Association

Commenting on the above, Dr Harold Gifford, Omaha, says

"After considerable discussion, in which the only discordant note was the suggestion that action be postponed, the rules and resolution were unanimously adopted It was predicted that these rules will not prevent commission giving on account of the difficulty of proving the offense, but it was answered that because we can not convict all thieves and gamblers there is no reason why we should not have a law which will enable us to punish them if they are convicted I believe this is the first positive action to be taken by any society in the United States, if I am incorrect in this belief I shall be glad if any of your readers will correct the error"

In partial answer to Dr Gifford concerning previous action on this point, we are able to give the following facts

The House of Delegates of the American Medical Association at the New Orleans session in 1902, adopted the following resolutions

Resolved That the House of Delegates recommend the adoption by county medical societies in affiliation with this body of the following resolution

Resolved That any member of a county medical society proved guilty of division of fees either the giving or the receiving of a part of a fee without the full knowledge of the patient, be held guilty of misconduct for which he may be expelled from the county medical society (THE JOURNAL xxxviii, 1661)

A number of county societies have taken action on this subject, among them the Chicago Medical Society, which, in 1905, adopted a resolution which read as follows

It is derogatory to professional character for physicians to pay or to offer to pay commissions to any person whatsoever who may recommend to them patients requiring general or special treatment or surgical operations It is equally derogatory to professional character for physicians to solicit or receive such commission

Oppose Contract Practice

The Westerly (R I) Physicians' Association has adopted resolutions against lodge or contract practice The secretary of the association, Dr W A Hillard reports that every physician in the town has subscribed to these resolutions

Organization in England

In the *British Medical Journal*, Dec 22, 1906, is published an address by Sir Victor Horsley on the necessity of union in the medical profession, with special reference to so called trade-unionism of which physicians are sometimes accused In the course of his remarks he said that what is wanted in the profession is absolute unionism, collective action which will result in the laying of a foundation on which new things and new ideas can take root, flourish and fructify By uniting and helping each other the members of the medical profession will further the progress of medical science Therefore, unionism in the medical profession can not be objected to He says that it is our duty to be trade unionists, in that we should help our professional colleagues by associating ourselves together closely as a profession, and the way to do that at the present day is to have every member of the profession join the only

existing collective organizations—in Great Britain the British Medical Association, and in this country the American Medical Association

Sir Victor says that although such an association might not necessarily help some men in life, it would be of the utmost utility and helpfulness to many to whom life does not come so easy, who do not see so readily as to how they are going to support their families or educate their children It is just those, he says, who do not want to take anything out of an association who ought to put the most into it, because they can best afford to do it, and thereby help on the material and moral progress of their less fortunate brethren All, therefore, should join the association, not only for their own profit, but to secure that of others

What are the interests of the community as compared with those of the general public? Sir Victor pronounces three chief interests First, the standard of professional life and professional conduct, to be maintained at a high level, second that a medical practitioner shall receive a fair compensation for his work, and third, that the state should recognize the importance, the difficulties, and the national responsibilities of medical work The satisfaction of these requirements or interests will secure to the public the help of a thoroughly efficient medical service Therefore, the interests of the public are identical with the interests of the medical profession

More Societies Adopt Resolutions

The following societies have adopted resolutions pledging their support in the campaign against the reduction of insurance examination fees

Barbour County (Alabama) Medical Society
Greene County (Alabama) Medical Society
Clarke County (Georgia) Medical Society
Worth County (Georgia) Medical Society
Whiteside County (Illinois) Medical Society
Western Kansas Medical Society
Jackson County (Mississippi) Medical Society
Leflore County (Mississippi) Medical Society
Platte County (Missouri) Medical Society
Mercer County (New Jersey) Medical Society
Chaves County (New Mexico) Medical Society
Columbia County (New York) Medical Society
Troup County (Georgia) Medical Society
Wise County (Virginia) Medical Society
Dane County (Wisconsin) Medical Society
Whitman County (Washington) Medical Society

The Secretary of the Ionia County (Michigan) Medical Society in the report of the annual meeting in the *Journal of the Michigan State Medical Society* says "The society has awakened to the fact that we have in and among ourselves the necessary qualifications for a wide awake progressive medical society We have as fine a band of deep thinking hard working, clear headed medical men as it has been my privilege to meet"

The Rutherford County (Tennessee) Medical Society held two meetings in December, which were mainly devoted to the consideration of practical questions Papers were read on "The Business Side of the Medical Profession and on Medical Ethics" This society is so well pleased with its experiment of meeting semi monthly that it has adopted an amendment to the constitution providing for two meetings each month The society adopted the fee schedule used by the physicians of Murfreesboro as its standard

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address but the request of the writer not to publish name or address will be faithfully observed

PREPARATION OF CHROMICIZED CATGUT

CLEVELAND OHIO Feb 21 1907

To the Editor—Please publish some methods of preparing chromicized catgut having varying degrees of resistance to absorption WALTER G STERN

ANSWER—The method of preparing chromicized catgut was given in THE JOURNAL Sept 1 1906 p 703 as follows 'The gut is freed from fat by soaking for twenty four hours in ether It is then soaked for twenty four hours in a watery solution of chromic acid from 1 to 4 per cent dried in an oven and boiled in cumol" Most authorities recommend 4 per cent. solution of chromic acid The length of time which the material will resist absorption by the tissues varies according to the size of the catgut. H. Cabot found (*Boston Med and Surg Jour* March 27, 1902) that chromicized catgut No 0 had little strength at the end of four weeks No 1 full strength at five to eight weeks, and No 2 full strength at eight to twelve weeks DaCosta states (Modern Surgery 4th edition 1903 p 51) that chromicized gut No 3 and No 4 will remain unabsorbed in the tissues from four to six weeks

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers U S Army week ending Feb 23 1907

Jones Percy L., asst. surgeon granted two months leave of absence

Bradley Alfred E surgeon will on the completion of his duty at Fort Slocum N Y proceed to Fort Sheridan Ill for the purpose of packing and shipping public property, and will then proceed to Jefferson Barracks Mo for station

Usher F M C and Webb Walter D asst-surgeons appointed members of examining board to meet at St. Paul Minn. for the examination of officers of the Quartermaster's Department for promotion

Morse Charles F asst surgeon will in addition to his present duties at Fort Howard Md. attend Fort McHenry Md. during the temporary absence of Capt. Kent Nelson asst surgeon

Stephenson William surg relieved from duty at the Presidio San Francisco Cal and on arrival of 25th Infantry at San Francisco will report to the commanding officer for duty to accompany that command to the Philippine Islands on arrival at Manila will report to the commanding general Philippines Division for assignment to duty

Havard Valery asst-surgeon general is detailed to represent the Medical Department of the Army at Convention of the Interstate National Guard Association to be held at Columbia S C March 25 1907

Brown Ira C contract surgeon relieved from duty at Fort McIntosh Texas, and ordered to accompany the Third Battalion 5th Infantry to the Philippine Islands for duty

Ames Roger P contract surgeon left Fort St Philip La. on leave of absence for one month

Mason, George L. dental surgeon left Fort McPherson Ga and arrived at Fort St. Philip, La for temporary duty

Branch Frederick D contract surgeon relieved from duty at Fort Wood N Y and ordered to Fort Preble Me. for duty

Mount, James R contract surgeon arrived at San Francisco Cal from Philippine service, and ordered to the Presidio of Monterey Cal for duty

Bell Leonard P contract surgeon arrived at San Francisco Cal for leave of absence from the Philippines Division

Hutson T Ogier contract surgeon left Fort Moultrie S C, and arrived at Fort St. Philip La for temporary duty

Jones Edgar C contract surgeon ordered from Allegheny, Pa to the Army General Hospital Fort Bayard N M for duty

Marshall John S examining and supervising dental surgeon granted sick leave of absence for one month

Stallman George E dental surgeon arrived at San Francisco Cal from Philippines service and ordered to Fort Sam Houston Texas for duty

Stone Frank P dental surgeon relieved from duty at Fort Sam Houston Texas, and ordered to Macon Mo for annulment of contract.

Wing Franklin F dental surgeon left Fort Washakie Wyo and arrived at Fort Robinson Neb for temporary duty

Navy Changes

Changes in the Medical Corps U S Navy for the week ending Feb 23 1907

McLean, N T asst surgeon discharged treatment Boston Hospital and ordered to duty at Navy Yard, Boston

Grieve C C. P A Surgeon commissioned P A surgeon from June 2 1906

Ryder C E P A surgeon commissioned P A surgeon from June 26 1906

Bacon S acting asst surgeon ordered to duty Naval Hospital Norfolk Va

Moore J M surgeon to Norfolk Hospital

Furlong F M surgeon detached Boston Hospital to duty in connection with fitting out of *Vermont* and duty aboard that vessel when commissioned

Public Health and Marine-Hospital Service

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Feb 20 1907

Banks C E. surgeon granted leave of absence for 14 days from February 21

White J H surgeon directed to proceed to Baton Rouge La for special temporary duty on completion of which to rejoin station at New Orleans

Williams L L., surgeon directed to report at Bu... for special duty on completion of which to rejoin station at

Lumsden L L P A surgeon granted leave for period of 30 days from February 18 on account

Corput C M P A. Surgeon directed to ... to Texas for special temporary duty on complet... rej... station at Galveston

Roberts N asst surgeon granted leave ... from Feb 11 1907 under Paragraph 191 of ...

Gribble B C acting asst. surgeon granted leave of absence for five days from Feb 14, 1907 under Paragraph 210 of the Regulations.

Schwartz L. acting asst. surgeon, granted leave of absence for 5 days from Feb 16 1907, under Paragraph 210 of the Regulations

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public-Health and Marine-Hospital Service, during the week ended Feb 22, 1907

SMALLPOX—UNITED STATES

Florida Lakeland, Jan 26-Feb 2 6 cases, Feb 9-16, 3 cases
Georgia Augusta Feb 5-12, 3 cases.
Illinois Chicago Feb 9 16, 1 case
Indiana Indianapolis, Feb 3 10, 4 cases
Maryland Baltimore, Feb 9-16 1 case.
Minnesota General, Dec. 1 Jan 28 277 cases, 1 death.
Missouri St. Louis Feb 9 16 1 case.
Montana Helena, Jan. 1 31 1 case.
North Carolina Charlotte, Feb 9-16, 1 case.
Ohio Cincinnati Feb 8-15, 2 cases.
Utah Ogden, Jan 1-31 3 cases.
Washington Spokane, Feb 2 9, 13 cases

SMALLPOX—FOREIGN

Argentina Buenos Ayres, Dec. 29 Jan 5 1 case.
Brazil Bahia Dec. 29-Jan 12 6 cases
Canada Toronto, Jan. 9-26 2 cases
China Shanghai Jan 6-13 1 case.
France Paris, Jan. 19-26 19 cases
Great Britain Cardiff Jan 19-Feb 2 2 cases, 1 death, Hull, Jan. 19 26 1 death Liverpool, Jan 19 Feb 2, 2 cases, Southampton Jan 26-Feb 2, 1 case.
India Calcutta, Dec. 29 Jan 5 12 deaths (epidemic), Rangoon Dec. 29 Jan 5 1 death.
Mexico Vera Cruz, Jan 26-Feb 2 1 case 1 death.
Netherlands Rotterdam Jan 26-Feb 2 5 cases, 1 death.
Russia Moscow, Jan 5-26, 11 cases, 8 deaths, Odessa Jan. 12 19 13 cases, 5 deaths.
Turkey Constantinople, Jan 20-27, 1 death.

YELLOW FEVER.

Mexico Tuxpam, Jan 22 29 1 case 1 death

CHOLERA—INSULAR.

Philippine Islands Provinces, Dec. 15 22, 19 cases 10 deaths Dec. 22 29, 20 cases, 11 deaths Dec. 27 Jan 5, 21 cases, 12 deaths.

CHOLERA—FOREIGN

India Bombay Jan. 8 15 3 deaths Calcutta, Dec. 29 Jan 5, 70 deaths, Cochin Dec. 28, 1 death, Rangoon, Dec. 29-Jan. 5 18 deaths

PLAGUE.

Egypt Ismailia, Jan. 25-29, 1 case, 1 death Assiout Province Jan 24-29, 1 case.
India General Dec. 29-Jan 5 12,918 cases 10 363 deaths Bombay Jan 8 15 33 deaths Calcutta Dec. 29 Jan 5, 10 deaths Rangoon 18 deaths.
Japan General Jan. 1 19, 9 cases.
Mauritius Dec. 13-Jan 3 65 cases 43 deaths
Siam Bankok Nov 21 1 death.

Marriages

O P GRANT, M.D., Cantrall, Ill., to Miss Mabel Irene Green, of Chicago, January 9

OSCAR F BLANK, M.D., to Miss Diana Van Gordon, both of Bethlehem, Pa., February 1

JOHN JOSEPH HECK, M.D., Baltimore, to Miss Nina Davis, at Washington, D. C., February 12

EDWARD M. BUCK, M.D., Montrose, Iowa, to Miss Kathryn Rowe, at Summitville, Iowa, February 2

HENRY J POOL, M.D., Port Clinton, Ohio, to Miss Louise Debreaux, of Detroit, Mich., February 6

FRANK C. WITTER, M.D., Ann Arbor, Mich., to Miss Lena Lyle Armstrong, of Lapeer, Mich., February 14

WALTER M REEDY, M.D., Scranton, Pa., to Miss Mary Theresa Healey, of Dunmore, Pa., February 1

RICHARD F NOTH, M.D., American Falls, Idaho, to Miss Genevieve O'Donnell, of Haverhill, Minn., February 12

FRANCIS J ANTOINE, M.D., to Miss Rose Marie Garvey, both of Prairie du Chien, Wis., at Racine, Wis., February 11

JOHN A. CALDWELL, M.D., Cincinnati, to Miss Ortha C Featherstone, of New York, at Lowell, Mass., February 14

WILLIAM HEWSON BALTZELL, M.D., Baltimore, to Miss Alice Steele Cheney, of Elm Bank, Needham, Mass., February 12

RAY WALLACE MOE, M.D. Peekskill, N. Y., to Miss Ella Madalene Greeley, of Long Island City, N. Y., February 10

JOHN DIEDRICH MORITZ, M.D., Piedmont Lodge, Keswick, Va., to Miss Martha Washington Jennings, at Baltimore, February 12.

Deaths

Charles K. Yancey, M.D University of Virginia, Department of Medicine, Charlottesville, 1870, passed assistant surgeon, United States Navy, who entered the service May 1, 1871, was made passed assistant surgeon June 12, 1876, and was retired May 21, 1880, on account of disability incurred in line of duty, who had been an inmate of the Government Hospital for the Insane, Washington, for 29 years, died in that institution, from tubercular osteitis of the right tibia, February 9, aged 58

Adolph Rupp, M.D New York University Medical College, New York City, 1877, a member of the American Medical Association and the New York Academy of Medicine, a specialist in diseases of the ear, nose and throat, and heart and lungs, the translator of Ziemssen's "Cyclopedia of General Medicine," a member of the staff of several hospitals and dispensaries in New York City, died at his home in New York, February 7, from heart disease, following influenza, aged 50

Henry W Elmer, M.D University of Pennsylvania, Department of Medicine, Philadelphia, 1869, a member of the American Medical Association, for 24 years secretary of the Cumberland County Medical Society, and for many years chairman of the standing committee of the Medical Society of New Jersey, died at his home in Bridgeton, where his father, grandfather and great-grandfather had been practitioners before him, February 13, after an illness of two years, aged 59

William O Lantz, M.D Jefferson Medical College, Philadelphia, 1882, of Lemasters, Pa., a member of the state and county medical societies, and formerly president of the Franklin County Medical Society, died in Johns Hopkins Hospital, Baltimore, a few hours after an operation for complicated disease of the liver, February 15, aged 51 His funeral at Chambersburg was attended by a delegation from the county medical society, which also furnished pall bearers

George E Rosenthal, M.D College of Physicians and Surgeons, Chicago, 1902, a member of the American Medical Association, assistant surgeon of the Illinois Sailors and Soldiers' Home, Quincy, Ill., attending surgeon and pathologist at the Blessing Hospital, and secretary of the Adams County Medical Society, died in Quincy, February 17, from typhoid fever, aged 34

Henry C Faulkner, M.D Leonard School of Medicine, Medical Department of Shaw University, Raleigh, N. C., 1894, formerly a practitioner of Chicago, but for the last four years a missionary on the West Coast of Africa, secretary of the board of health, Monrovia, Liberia, and city and harbor physician, died from pneumonia, Dec. 11, 1906

John G Keith, M.D University of Louisville (Ky.) Medical Department, 1891, of Leadville, Colo., a member of the American Medical Association, a veteran of the Civil War, died in St Louis, Mo., February 16, from paralysis following a lightning stroke last summer, aged 58

Jacob F Whiting, M.D University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1879, a member of the American Medical Association, and an esteemed practitioner of Spencer Brook, Minn., died at his home in that place, February 13, from pneumonia, aged 62

Thomas D Bedford, M.D Bellevue Hospital Medical College, New York City, 1882, of Kansas City, Mo., coroner of Jackson County, Mo., in 1897, died at University Hospital, Kansas City, February 13, from pneumonia, complicated by chronic cardiac disease, aged 53

Ernst von Schulenberg, M.D University of Buffalo (N. Y.) Medical Department, 1880, a well known physician and clergyman of Sandusky, Ohio, and the leading historian of that city, died at his home, February 11, after an illness of one month, aged 57

William H Rowe, M.D University of Iowa, College of Homeopathic Medicine, Iowa City, 1885, of Waukesha Wis., died February 3, at the Northern Hospital for the Insane, Oshkosh, Wis., where he had been an inmate for a year, aged 50

Weston D Bidaman, M.D University of Buffalo (N. Y.), Medical Department, 1878, a member of the state and county medical societies, died at his home in Buffalo, February 15, from heart disease, after an illness of eight months, aged 55

Henry Warner, M.D Eclectic Medical College of Philadelphia 1877, of Hampden, Mass., a veteran of the Civil War, died suddenly from cerebral hemorrhage, while making a professional call in East Longmeadow, February 12, aged 59

George Ross Griffith, M.D Starling Medical College, Columbus (Ohio) 1872, a member of the Washington County (Pa.) Medical Society, died at his home in Carnegie, February 4, from nephritis, after an illness of two years, aged 60

John F English, M.D University of Vermont, College of Medicine, Burlington, 1898, of Providence, R. I., died at the Rhode Island Hospital, Providence, February 9, from lobar pneumonia, after an illness of three days, aged 31

Frederick Stanley Cowles, M.D Yale Medical School, New Haven, Conn., 1893, a member of the state and county medical societies, died at his home in Essex, Conn., from heart disease, after a long illness, February 12, aged 37

John Quincy Adams Hollister, M.D Eclectic Medical Institution, Cincinnati, 1878, a veteran of the Civil War, died at his home in Mount Vernon, N. Y., February 10, from cerebral hemorrhage, after an illness of two years, aged 69

John V Martin, M.D Toledo (Ohio) Medical College, 1896, of Toledo, a member of the state and county societies, died at St. Vincent's Hospital, Toledo, February 9, from typhoid fever, after an illness of two weeks, aged 44

Perry Waltman, M.D Eclectic Medical Institute, Cincinnati, 1882, formerly of Birmingham, Ohio, died at the home of his sister in Mansfield, Ohio, February 11, from paralysis, after an invalidism of three years, aged 50

Wesley A. Derhamer, M.D Jefferson Medical College, Philadelphia, 1875, a member of the state and county medical societies, died at his home in Lehighton, Pa., February 17, after an illness of one week, aged 57

William E Carroll, M.D New York University Medical College, New York City, 1890, a member of the state and county medical societies, died at his home in Taunton, Mass., February 18, after a short illness

Fred Henry Messenger, M.D University of Iowa, College of Homeopathic Medicine, Iowa City, 1906, of Plaza, N. D., died at his home February 5, from septicemia due to infection after vaccination, aged 25

William J Chappell, M.D College of Physicians and Surgeons, Baltimore, 1886, died at his home in Baltimore, February 7, from the effects of cyanid of potassium taken with suicidal intent, aged 49

Emery Gregg Ireland, M.D Rush Medical College, Chicago, 1899, formerly of Miles City, Mont., was found dead in his bed at the home of his cousin in Pittsburg, Kan., February 5, from heart disease

Ulysses Sidney Grant Binger, M.D Milwaukee (Wis.) Medical College, 1899, of Lovelocks, Nev., died from pneumonia, at a ranch 10 miles south of that place, February 8, after an illness of one week

Henry C Briggs, M.D Jefferson Medical College, Philadelphia, 1847, of Homeville, Va., at one time superintendent of public schools of Sussex County, died suddenly, February 11, aged about 70

Michel Omer Routhier, M.D summa cum laude, École de Médecine et de Chirurgie, Montreal, 1893, died at his home in Lawrence, Mass., from pneumonia, after an illness of three weeks, aged 46

Adolph C Sontag, M.D Wisconsin College of Physcians and Surgeons, Milwaukee, 1904, died at the home of his parents in Milwaukee, February 8, after an illness of six weeks, aged 28

James H Delany, M.D Bellevue Hospital Medical College, New York City, 1886, was found dead in his office in Erie, Pa., February 12, from heart disease following influenza, aged 54

T Scott McFarland, M.D Chicago Homeopathic Medical College, 1894, formerly of Sedalia, Mo., died at his home in Tucson, Ariz., February 11, after a long illness, aged 38

James Long, M.D St. Louis Medical College, who retired from practice in 1882, died at his home in St Louis, January 16, from nephritis, after an illness of one week, aged 68

Thomas A Corlett, M.D Detroit (Mich.) College of Medicine, 1892, died at his home in Manton, Mich., February 9, from angina pectoris, after a long illness, aged 43

Leland M. Wright, M.D Washington University, Medical Department, St Louis, 1867 died at his home in Altona, Mo., February 8, from cerebral hemorrhage, aged 66

John Edward Bolte, M.D Baltimore Medical College, 1891, registrar of wills for Baltimore County, Md., died at his home in Harrisonville, Md., February 16, aged 41

Francis A. Reynolds, M.D Columbus (Ohio) Medical College, 1879, died at his home in Kendallville, Ind., February 15, after a lingering illness, aged 62

Deaths Abroad.

F Fajardo, M.D., director of the Bacteriologic Laboratory at Rio de Janeiro, president of the Academia Nacional de Medicina, etc., died recently, presumably from the effects of a preventive injection of antiplague serum

Society Proceedings

COMING MEETINGS

Medical Society of Missouri Valley, Omaha, Neb., March 21 22 1907
American Association of Anatomists Madison, Wis., March 27 29
Med. Assn. of District of Columbia Washington April 2.
Tennessee State Medical Assn Nashville April 9
Mississippi State Medical Association Gulfport April 10
South Carolina Medical Association Bennettsville, April 10
Medical Assn of State of Alabama, Mobile, April 16.
Florida Medical Association Tampa, April 17
Medical Association of Georgia, Savannah, April 17

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Regular Meeting, held Jan 8, 1907

The President, DR. WILMER KRUSEN, in the Chair

Vaginal Hysterectomy

DR. GEORGE EERTY SHOEMAKER reported the histories of ten patients operated on Each made a normal recovery Nearly all the patients had passed through the menopause Great stress was laid on the importance of paying heed to postmenopausal bleeding The danger of overlooking early malignancy in the examination of scrapings was emphasized

DISCUSSION

DR JOHN C HIRST prefers atmokausis in a case of persistent bleeding where examination of the scrapings shows no malignancy

DR. BROOKE M ANSPACH believes there are cases of persistent metrorrhagia or menorrhagia requiring hysterectomy in which no pathologic lesion of the endometrium exists and in which therefore examination by curettement is absolutely negative In these cases the lesion is in the myometrium and they are amenable only to radical treatment

DR C C. NORRIS believed that in the large majority of cases the microscope can be relied on to give an absolute diagnosis in all cases of carcinoma of the fundus uteri The chief sources of error in the pathologic diagnosis, he thinks, are that the tissue is often improperly hardened, that it is not all cut and consequently not all examined, and that in some cases the diagnosis is made by men not especially experienced in this line of work.

Case of Chorioepithelioma.

DR. BROOKE M ANSPACH and DR. HENRY R. ALBURGER reported a case of chorioepithelioma which came to operation and autopsy The history did not very closely suggest the disease, which was diagnosed only after curettage and the examination of scrapings Widespread metastases were found at autopsy, involving almost all of the visceral organs except the spleen *The tumor did not contain chorion villi. The ovaries* were riddled with Graafian follicle cysts There was very little lutein tissue present.

Treatment of Eclampsia

DR. JOHN C HIRST'S conclusions as to the treatment of eclampsia, based on the cases at the University of Pennsylvania Maternity, were as follows

The routine treatment consisted of 1 *Chloroform to avert* the attack, if possible 2 Fifteen minims of fluid extract of veratrum viride hypodermically 3 Wash out stomach and through the tube introduce 2 ounces of castor oil and four drops of croton oil. 4 Hot vapor bath or hot pack, for thirty minutes, in every four hours 5 Hypodermoclysis of one pint of salt solution under the breast every eight hours 6 If convulsions recur, repeat the veratrum viride in five minim

doses, every hour, for three doses, and then if blood pressure is still high and the patient is cyanotic, venesection is performed, removing from 8 to 16 ounces of blood. 7 Under ordinary circumstances let the labor alone The use of morphin and pilocarpin is restricted to desperate cases only Venesection is not done, as a rule, until veratrum viride has been given a trial

Accouchement forcé is used only under the following conditions 1 When the patient is far advanced in spontaneous labor, forceps are applied 2 If patient is seen very early after the first onset of convulsions, it may be advisable to interfere. 3 If patient is going from bad to worse under treatment, the uterus is emptied as a last resort The method employed is either vaginal hysterotomy (the so called vaginal Cesarean section) and forceps, or the Pomeroy bag, followed by forceps The latter method is probably the better The cases studied were 88 cases of eclampsia and 278 cases of albuminuria This treatment gave a mortality, excluding cases brought in in a moribund condition, of 13 4 per cent Of the cases of albuminuria 40 had had eclampsia in previous labors (one four times), but escaped under treatment

DISCUSSION

DR. RICHARD C NORRIS said that at the Preston Retreat he sees on an average two or three cases of eclampsia in a year, and four or five cases in consultation, but he has had only one case of eclampsia in his private practice in fifteen years He has never done Cesarean section nor used a Bossi dilator in eclampsia at the Preston Retreat. When the cervix is dilated, forceps or version is resorted to, and prior to dilatation eliminative treatment is vigorously employed, while a bag is used to obtain dilatation

The method of elimination by the bowel he regards as the most valuable He has yet to see a woman die of eclampsia from whom he was able to secure from 12 to 20 stools in twenty four hours This is his first aim in treating any case Two ounces of Epsom salts are first administered, and if vomited, then three to five drops of croton oil are given in sweet oil The danger was pointed out of excessive amounts of salt solution unless the purging or sweating is free. Dr Norris said that vertrum viride should be used with caution, in some cases of eclampsia being distinctly contraindicated If the condition is of sudden onset, veratrum would be useful in moderate, frequently repeated doses until it has markedly slowed the pulse Morphia he usually does not use

There should be a differentiation as far as possible between the various types of the disease. Cases showing a slow onward progress suggest a kidney type, and in such cases morphin would be a bad drug to give, especially in the interstitial type, as recently pointed out by Dr Tyson Other groups of cases may be looked on as of intestinal origin, and here large doses of morphia to control convulsions and copious lavage of the bowel would be of value Another group of cases, hepatic in origin, he has always felt to be the most hopeless Admitting that there is nothing to prove the theory of the syncytial origin of the toxins of eclampsia, he is inclined to group those as possibly of syncytial origin in which the onset is sudden and without premonitory signs In such a case he would not hesitate to either stretch or cut the cervix and deliver the patient rapidly The plan of treatment to which he has always objected is the routine use of vigorous surgical procedure He admits that the literature of the world in the last year or two shows a steadily decreasing mortality from the aggressive plan of surgical treatment, but he believes the secret of this to be that all cases are being so treated, and that the mild ones that would have gotten well without the surgical treatment are credited to it, and that the worst cases that end fatally in spite of surgical treatment continue to give a mortality to even that treatment.

DR. BARTON COOKE HIRST does not agree wholly with Dr Norris concerning purging He thinks it is brought about too slowly to be of great value in the worst cases, and in such cases he depends mainly on sweating This, however, he thinks, is very imperfectly carried out in the average private house, and suggests that the double mortality of the private house cases compared with the hospital cases may be due to this imperfect method. An illustration was given in which a patient treated at home was given up to die by the attending physician, when sweating brought about by the apparatus used by Dr Hirst in the hospital resulted in recovery The patient must be put into a regularly arranged tent, a steady stream of live steam must be introduced under the tent and the treatment must be continued for thirty minutes, when literally quarts of fluid can be drained from the woman's blood vessels The loss of fluid is replaced by normal salt solution, given midway between the sweats The sweats should be given every four hours during the worst of the attack, but should be continued once or twice a day for several days

Of special interest to Dr Hirst in the treatment of eclampsia are the relative advantages of rapid delivery during pregnancy or labor and the conservative treatment His feeling at the present time, after ample experience with both kinds of treatment, is that the conservative obstetric treatment of eclampsia gives the best results An absolutely rigid rule, however, can not be followed Cases are presented in which he deliberately resorts to accouchement forcé in spite of his prejudice against it, for example, a woman entering the hospital comatose and in convulsions, who fails to respond to the routine treatment, is subjected to accouchement forcé He has seen some of these patients recover unexpectedly

Veratrum viride has seemed to him the best drug in the treatment Venesection has not worked well in his hands If veratrum viride is indicated, he gives 15 minims of the fluid extract as a first dose, repeated in five minim doses as often as necessary to keep the pulse at 50 or 60 In twenty years he has seen but a single case of veratrum viride poisoning The woman, however, was easily revived by digitalis, strong coffee and alcoholic stimulation

DR. HOPKINSON has employed the Straganoff treatment in a large number of cases, and in eight consecutive cases it was successful except in the last

DR. SWITHIN CHANDLER referred to the change of opinion concerning the use of morphia

DR. WILLIAM R NICHOLSON regards rapid delivery as the most important point. He cited a case which recently came under his care. The patient had been brought to the maternity after having had a dozen convulsions at her home The mere placing of the hand on the abdomen caused convulsions Eliminative treatment was instituted, but the convulsions remained Under mild chloroform anesthesia the cervix was dilated without tearing and the child, which was dead, delivered by forceps There were subsequently two convulsions, and within the next thirty six hours the woman returned to consciousness He would not go on record as believing this to be the proper treatment for a large number of cases He does believe, however, that accouchement forcé is indicated in a certain limited number of cases after eliminative treatment has been instituted

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MEDICAL SOCIETY OF THE STATE OF NEW YORK.

One Hundred and First Annual Meeting, held in Albany, Jan 28 30, 1907

(*Continued from page 721*)

Toxic Nephritis Dependent on Surgical Conditions

DR. NATHAN JACOBSON, Syracuse, said that while the toxic agencies producing nephritis have been extensively studied, the surgical conditions that are capable of producing pathologic changes in the kidneys have not received so much attention It is still an open question whether the presence of bacteria in the urine implies a diseased condition of these organs, or whether the bacteria can be eliminated without producing pathologic changes The question has also arisen whether in this form of nephritis the provoking cause is the bacteria or the toxins produced by them The author reviewed the experimental work that has been done in the endeavor to solve these questions and the conclusions thus far reached. It seemed that in cases of general infection the passage of bacteria through the kidneys produces various anatomic and pathologic changes in the kidney structure Toxic nephritis

presents rather a favorable prognosis if the primary disturb ance can be relieved The author cited three cases The first one was, presumably, a staphylococcic infection The patient suffered from septic endocarditis as well as nephritis, in the second case, one of intestinal obstruction without septic dis turbance of any kind but with complete arrest of intestinal function a very serious and all but fatal form of nephritis was awakened, the third case in which there was complicating gall stone disease, a subacute pancreatitis, and in consequence of the disturbance of the secretory function of this gland a toxic condition was aroused causing not only nephritis but also glycosuria In each of the three cases after removal of the causal condition all evidence of renal disease disappeared. It is generally held that the presence of nephritis is to be re garded as a possible contraindication to surgical operation, but it seems that in a certain class of cases bacterial or toxic nephritis becomes rather a most positive indication for opera tion as by such a course only can the nephritis be removed

Surgery of Foreign Bodies in the Respiratory Tract.

DR. WILLIS G MACDONALD, Albany, said that a striking feature of foreign bodies aspirated is their size, as for in stance a hatpin, 14 cm long, having a head more than a centimeter in diameter, artificial tooth plates having as many as four teeth, and pieces of bone 2½ cm long The great size of bodies aspirated may in the absence of trustworthy evidence lead to serious errors in diagnosis The general im pression gained from literature corresponds to the author's experience that the normal plan of treatment of foreign bodies lodged in the deep trachea or bronchi is a preliminary inferior tracheotomy If the body is mobile, a wide tracheal incision, left well open, will soon lead to expulsion through the violent efforts of coughing If the body is fixed in the bronchus or the lower trachea, bronchoscopy, using a short tube, may be employed with precision The mortality from the aspiration of foreign bodies has been materially decreased during recent years This is due to the use of the Roentgen rays for diagnostic purposes, to the invention of mechanism for the direct inspection of the larynx, trachea and bronchi, and to the recent developments in technic.

Treatment of Diffuse Septic Peritonitis Following Appendicitis

DR RUSSELL S FOWLER, Brooklyn, presented the following conclusions 1 A small incision and the avoidance of even tration 2 Thorough cleansing of the primary focus of infec tion and removal of the appendix. 3 Evacuation and cleans ing of all accessory abscess cavities and the pelvis before wash ing out the peritoneal cavity 4 A rapid systematic flushing of the peritoneal cavity with hot saline solution 5 The continuance of the saline flushing until the sutures are placed and for the most part tied 6 The provision of proper drain age for the pelvis either by means of a large glass tube con taining a capillary drainage strip emerging through the lower angle of the wound, or in females by a large caliber rubber tube filled with wicking passed through a posterior colpotomy incision 7 The drainage of accessory abscess cavities with gauze or wicking 8 The elevation of the head of the bed to accelerate the drainage of septic fluid into the pelvis, whence it can be removed through the tube, or in case of vaginal drainage find a ready exit. He said there are certain cases of diffuse septic peritonitis which may be closed safely without drainage These are cases in which there are no necrotic areas and in which the serous covering of the intes tine is not "blistered" or desquamated, or swollen and infil trated It is his firm conviction, however, that cases for complete closure should be selected carefully and this can only be done safely by an operator of wide experience No more striking evidence can be adduced in support of drainage that the frequency with which secondary abscesses form

Study of Blood Pressure

DR HENRY L ELSNER, Syracuse, stated that the sphygmo manometer often gives information which is strongly sus pected without it, but that conditions are unfolded by cautious blood pressure study which can not be made positive without it. It is not an uncommon experience to find that the sphygmomanometer leads to conclusions diametrically opposite to those reached without it The author showed the impor tance of arterial tension for diagnostic and therapeutic pur poses, and holds that the sphygmomanometer of to day gives sufficiently accurate information of systolic, diastolic and pulse pressure to justify safe conclusions Dr Elsner con sidered the baneful results which follow chronic arterial hyper tension unless the underlying process is controlled. Hyper tension is usually a compensatory measure and it is often a mistake to give drugs which lower blood pressure without considering primary causes Longevity depends on cardio vascular competence, and hypertension frequently exists in supposedly healthy individuals, especially in those who are strenuous and active, and its early recognition and control are of economic importance to the state The author dealt with the differential diagnosis of hypertension and arterio sclerosis and on the importance of hypertension as evidence of renal change before the appearance of other symptoms The foundation for all treatment in regulating and preventing hypertension is temperance and sobriety The influence of the nitrites, chloral, iodids and other drugs is evanescent. The changes which follow in distant organs after the per sistence of hypertension during long periods are many and far reaching

The rapid development of arteriosclerosis in professional men is a depressing and alarming fact and worry is a causa tive factor in producing hypertension Exophthalmic goiter is a disease of normal tension or hypertension and its persistence often leads to arteriosclerosis Diabetes is also associated with hypertension The importance of disturbance within the splanchnic vessels and gastrointestinal tract as factors in the production of hypertension and ultimate vascular change was discussed In spite of high blood pressure, pulse pressure might be very low This condition is a valuable indication for cardiac stimulation The author considered the effect of filling the splanchnic vessels in the presence of pulmonary edema, and the use of nitroglycerin with adjuvants for this purpose was recommended in the presence of an insufficient heart with peripheral arterial obstruction associated with pul monary edema The author warned against one sided reason ing in blood pressure study

Classification of Blood Pressure Cases

DR LOUIS FAUGERES BISHOP, New York, said departures from normal blood pressure are classified into three principal classes—primary low arterial tension, high arterial tension and secondary low tension Certain special cases are described under constitutional low arterial tension He subdivides the high pressure cases into those due to nervous causes and those due to other causes Hypertonia vasorum idiopathica stands for a class of cases in which high arterial tension often ex ists but which evidently are not of nephritic origin, nor do they owe their origin to changes in the blood vessels This group of cases is becoming more important than formerly be cause it is the first departure from health noticed in those who break down under the strain of modern life, mental tension being the cause of the increasing number of persons who suffer from this disorder of the circulation The cure of this condition consists in regulating the functional activity of the brain, heart and blood vessels so that they shall run smoothly Hygiene, exercise and diet play an important part in the treatment.

The Criminal Lunatic, His Status and Disposition.

DR. ROBERT B LAMB, Matteawan State Hospital, dwelt on the present practice of dealing with the criminal lunatic in New York. The different forms of committments on criminal orders were discussed and certain defects in the present system were pointed out and remedies suggested No legal cognizance is now taken in cases of diminished responsibility or constitu tional inferiority, the old legal definition of insanity being the only interpretation usually permitted in the courts He strongly condemned the custom of permitting lay juries to pass on the mental condition of criminal lunatics and of constituting commissions of lunacy with a medical minority The bar as well as medical societies recognize the need of a betterment of present conditions

(To be continued)

Medical Education and State Boards of Registration

COMING EXAMINATIONS

MAINE Board of Registration in Medicine Common Council Room Portland March 5 Secretary Dr W J Maybury Saco

MASSACHUSETTS Board of Registration in Medicine Room 15 State House Boston March 12 13 Secretary Dr Edwin B Harvey, Room 159 State House, Boston

CONNECTICUT Medical Examining Board (Regular) City Hall New Haven March 12 13 Secretary, Dr Charles A. Tuttle, New Haven

CONNECTICUT Eclectic Medical Examining Committee, State Capitol Building Hartford, March 12 Secretary Dr George A. Faber Waterbury

CONNECTICUT Homeopathic Medical Examining Committee New Haven March 12. Secretary Dr Edwin C M. Hall New Haven

Iowa Board of Medical Examiners Des Moines March 19 21 Secretary Dr Louis A. Thomas Des Moines.

OKLAHOMA Board of Medical Examiners, Guthrie March 26-27 Secretary, Dr J W Baker, Enid.

California December Report.—The State Board of Medical Examiners of California reports the written examination held at San Francisco, Dec 18, 1906 The number of subjects examined in was 9, percentage required to pass, 75 The total number of candidates examined was 52, of whom 37 passed and 15 failed The following colleges were represented

PASSED

College	Year of graduation	Anatomy	Bacteriology	Chemistry	Materia Med	Obstetrics	Pathology	Physiology	Medicine	Surgery	General average.
Cooper Med Coll	1906	80	75	81	84	84	85	91	82	92	84 7
Cooper Med Coll	1905	87	77	77	96	78	63	80	84	91	81 4
Cooper Med Coll	1906	85	68	75	82	69	60	79	76	86	75 5
Oakland Coll of M and S	1906	83	85	60	73	90	68	71	75	94	77 6
University of California	1906	91	81	82	87	96	94	95	92	94	90 2
University of California	1906	86	77	94	87	96	85	100	79	95	88 7
University of California	*1906*	*90*	*85*	*88*	*82*	*94*	*88*	*95*	*91*	*91*	*88 7*
University of California	1906	82	75	82	80	89	75	93	75	91	82 3
University of California	1906	84	61	91	81	84	84	93	86	86	82 2
University of California	1906	88	78	88	85	88	70	78	70	86	81 2
University of California	1905	80	74	60	75	80	70	93	80	86	78 5
Univ of Southern California	1906	81	70	67	85	84	64	66	80	86	75 6
Chicago Homeo Med Coll	1889	75	79	87	88	88	75	82	84	84	81 3
Hering Med Coll	1903	78	65	67	90	72	60	78	90	85	76 1
Northwestern University	1903	80	80	68	78	94	70	64	75	87	77 4
Northwestern University	1904	85	82	76	82	94	84	93	73	91	83 6
Northwestern University	1905	89	80	77	91	97	80	90	80	90	86 6
Northwest Univ Woman's Medical School	1899	85	79	75	81	93	67	75	62	81	77 5
University of Kansas	1892	86	70	73	87	90	68	93	75	95	83 2
Hosp Coll of M, Louisville	1894	81	83	62	84	89	65	66	60	87	75 2
Kentucky School of Med	1906	79	68	76	82	84	61	85	82	87	78 2
Johns Hopkins Med. School	1906	88	72	76	76	82	76	90	80	80	80
Harvard Med. School	*1887*	*80*	*77*	*75*	*86*	*76*	*79*	*90*	*79*	*92*	*81 5*
Harvard Med School	1901	89	81	92	88	88	85	93	75	95	87 3
Harvard Med. School	1901	90	73	79	83	82	75	90	81	94	81 8
Coll of P & S, New York	1903	88	80	86	84	85	80	85	95	90	85 8
Medical Coll of Ohio	1896	93	80	70	80	90	93	96	83	90	88
Medical Coll of Ohio	1897	90	74	85	88	78	71	92	97	87	81 3
University of Pennsylvania	1897	90	84	73	92	97	87	80	83	91	86 1
Jefferson Med Coll	1879	95	89	76	90	89	80	85	85	94	87
Jefferson Med Coll	1892	75	75	76	77	90	73	68	85	80	75 3
Woman's Med. Coll., Penn	1903	88	77	76	73	77	72	78	81	92	79 3
McGill University Montreal	1903	91	74	77	80	76	81	95	95	83	83 5
University of Virginia	1891	90	81	66	83	64	70	83	80	85	78
R C S Eng R C P Lond *	1900	90	67	87	88	96	81	88	77	87	84 5
Royal Univ Turin Italy	1905	87	68	70	81	71	90	61	72	75	75
Univ of Würzburg Germany	1903	86	67	69	78	63	75	90	67	83	75 3

FAILED

Coll of P & S San Fran	1906	80	66	51	79	55	53	66	68	82	66 6
Univ of Southern California	1905	79	68	71	79	84	76	66	40	70	71 2
Am Coll of M & S Chicago	1906	78	62	43	77	71	60	51	80	82	67 1
Denver & Cross Coll of Med	1897	75	58	62	72	70	47	70	45	80	64 2
Coll of P & S, Chicago	1893	50	42	38	72	60	53	36	76	71	55 2
Coll of P & S Chicago	1898	79	80	75	78	80	50	64	49	76	71
Coll of P & S Chicago	1905	75	64	69	75	88	60	74	60	86	72 2
Coll of P & S Keokuk Ia	1890	80	64	47	87	68	60	60	77	70	68 8
University of Louisville	1905	68	63	56	79	77	63	48	50	79	64 7
University of Michigan	1880	79	63		83	75	60	68	62	70	60
Cincinnati Coll of M & S	1875	70	41	56	82	72	70	31	30	73	62 7
Medical Coll of Ohio	1882	52	54	60	74	67	35	51	32	53	53 1
University of Tennessee	1888	75	51	50	82	73	41	75	60	54	62.3
Queen's University Ontario	1888	62	66	70	63	75	57	49	26	78	55 1
Chiba M C Tokio Japan	1892	65	48	54	84	65	35	29	42	79	55 2

* Not a medical school but the Examining Board in England composed of the Royal College of Physicians of London and the Royal College of Surgeons of England

The following questions were asked

CHEMISTRY AND TOXICOLOGY

1 Write a prescription for the administration through the mouth of chlorin gas dissolved in water 2 Mention the sources and uses of benzin 3 Describe the theory of construction of the metric system 4 Name the chemical elements which enter into the formation of bone. On what does the hardness of bone depend? 5 What is the cause of lactic acid in the stomach and how can it be separated from hydrochloric acid? 6 Describe in detail a reliable method for determining the quantity of sugar in diabetic urine. 7 Give the maximum doses of the following (a) Acetanilid (b) Atropin sulph. (c) Beechwood creosote (d) Bichlorid of mercury (e) Extract cannabis indica 8 Name the ingredients of the following (a) Compound chalk powder (b) Dover's powder (c) Compound licorice powder (d) Carron oil (e) Blackwash. 9 Give chemical tests for detection in solutions of the following salts (a) Silver nitrate (b) Lead acetate (c) Ammonium chlorid (d) Ferric chlorid. (e) Corrosive sublimate 10 State the significance of the presence in drinking water of (a) nitrates and nitrites, (b) excess of albuminoid ammonia, (c) excess of chlorin

BACTERIOLOGY

1 Give the classification of bacteria and name an example of each division 2 Define ærobic anærobic differentiate facultative ærobins and facultative anærobins. 3 State method of sterilizing the following Fluid culture media, test tubes, rubber stoppers rubber gloves 4 Define the following terms Germicide, antiseptic aseptic, sterile, disinfectant. 5 Define immunity What do you understand by natural, acquired and inherited immunity? 6 To what requirements must bacteria conform to be considered the cause of disease? 7 Briefly describe the Widal reaction state its diagnostic significance 8 What do you understand by the terms *factor* and *unit*, as applied to antidiphthertic serum? Give the origin, morphology, properties and growths *Bacillus tuberculosis, Bacillus anthracis Bacillus edematis maligni.* What is understood by the terms trichobacteria leptothrix, sarcina?

ANATOMY

1 Describe and locate the appendix vermiformis. 2 Describe generally and briefly, the lymphatic system. 3 Trace the arterial blood from the heart to the foot. 4 Describe the palmar arch. 5 Describe the knee joint. 6 Locate and describe the stomach. 7 Locate the liver spleen pancreas and kidneys 8. Give the position and relations of the tricuspid and mitral valves of the heart. 9 Describe and name the muscles of the female perineum 10 Describe the sympathetic nerve naming and locating the principal ganglia

PATHOLOGY

1 Describe amyloid degeneration, and state in what cases and in what organs it is found. 2 Classify and describe briefly the cysts of the kidney 3 Enumerate in the order of frequency the tumors of the parotid glands 4 What diseases of the mother may be transmitted to the fetus? 5 Classify and describe abscesses of the liver 6. Give the sites and the pathology of varicose veins. 7 Describe the causative agent and the production of the lesions of scabies. 8 Examination of gross pathologic specimens. 9 Examination of microscopic specimens (histology) 1 slide. 10 Examination of microscopic specimens (pathology), 1 slide.

OBSTETRICS

1 Give the signs of pregnancy 2. What is hyperemesis? Give the symptoms, course and treatment 3 Name the varieties of placenta prævia 4 Under what conditions should a pregnancy be interrupted? 5 What effect does maternal syphilis have on the child? 6 What changes take place in the circulation at birth? 7 What are the causes of rupture of the uterus? 8 Describe the management of labor in breech presentations. 9 What is episiotomy? Under what conditions and how is it performed? 10 Describe the treatment for a complete perineal laceration.

HOMEOPATHIC MATERIA MEDICA.

1 What homeopathic medicines are most frequently indicated in threatened abortion? Give characteristic symptoms of two 2. Give symptomatology of china and nux vomica in icterus 3 Give the indications for cantharis mercurius cor and terebinth in nephritis. 4 Give differentiating symptoms of arsenicum and apis in dropsy 5 Give differentiating symptoms of mercurus cor veratrum alb and nux vomica in ailments of the intestinal tract. 6 Give four prominent objective symptoms of belladonna 7 Where patient has taken cold give symptoms characterizing aconite and gelsemium. 8 Differentiate bryonia and rhus tox in rheumatism. 9 In teething children with summer complaint, give characteristic objective symptoms of arsenicum antimonium crud. and chamomilla. 10 Give three symptoms of digitalis, cactus grand and aconite which would lead you to select either in preference to the others in heart trouble.

EXAMINATION IN SURGERY

1 Give dressing and position of forearm in fracture of olecranon process. 2 Give management of case of multiple fracture of inferior maxilla 3 Describe manipulation for reduction of backward dislocation of femur (on dorsum ilii) 4 Describe two methods of surgical procedure in pleural empyema 5. Describe a recognized method of prostatectomy 6 What are the indications for resection of head of humerus. 7 Give treatment of prolapsus ani 8 Diagnosis of aneurism of aorta 9 Diagnosis of malignant stenosis of pylorus 10 Mention various causes and clinical features of spinal curvature.

HOMEOPATHIC MEDICINE

1 Diagnose syphilis in first, second and third stages. Give treatment. 2 Where can you best hear the various heart sounds? How would you recognize mitral insufficiency? 3 Diagnose typhoid fever and prescribe for the diarrhea 4 How would you recognize perforation of the intestine in typhoid fever, and what treatment would be indicated? 5 Diagnose and give treatment for angina pectoris 6 Name some of the causes of retention of urine. How would you recognize same and what treatment would you apply?

7 What are the most common complications of measles and of scarlet fever? 8 How would you recognize and treat acute peritonitis? 9 Describe your treatment in a case of undeveloped scar latina. 10 Give the symptoms, treatment and prognosis of cirrhosis of the liver

PHYSIOLOGY

1 Name the enzymes concerned in the various phases of digestion 2 Give the histology of skeletal muscle tissue. 3 Describe and give the function of the red blood corpuscles. 4 Explain the neuron doctrine 5 Write a detailed description of the function of the seventh cranial nerve. 6 What is the effect of severing (a) the anterior root of a spinal nerve (b) the posterior root? 7 Distinguish between the paralyses caused by a lesion of the internal capsule and a lesion of the anterior horn cells of the spinal cord, in the following particulars (a) reflexes (b) nutrition of muscles (c) electrical reactions of muscles (8) Discuss briefly the physiology of the liver 9 (a) Describe the components of human semen (b) In what part of the female genital tract does fertilization occur? 10 Define (a) autolysis (b) emmetropia, (c) diopter (d) ontogeny (e) macula lutea, (f) aphasia, (g) suprarenalin (h) urea (i) zymogen (j) osmosis.

MEDICAL.

1 What are the essential differences in the blood picture between a typical primary and a typical secondary anemia? 2 What are the signs clinical and laboratory of a well-established chronic interstitial nephritis? 3 Give the symptoms and physical signs of chronic lead poisoning 4 By what physical signs do you recognize hydropneumothorax? 5 How would you treat a case of diphtheria involving the larynx? 6 Enumerate the causes of hematuria Differentiate between renal and extra renal blood in the urine. 7 What are the immediate indications for treatment in intestinal hemorrhage complicating typhoid fever? 8 Give symptoms of fibrinous pericarditis 9 Name the physical signs and clinical symptoms which would lead to the suspicion of lung abscess coming on as a sequel of pneumonia. 10 Discuss the data on which you might base a diagnosis of tuberculosis of the lung

MATERIA MEDICA AND THERAPEUTICS

Select ten of the following drugs Regarding each of the ten state (a) Adult dose (b) Therapeutic use (c) Symptoms produced by an overdose Write the name of the drug at the beginning of the answer which applies to it 1 Tartar emetic. 2. Nitrate of silver 3 Salicylate of bismuth. 4 Sulphid of calcium. 5 Camphor 6 Sulphate of Codein. 7 Arsenite of copper 8 Tinct chlorid of iron 9 Tinct. gelsemium. 10 Guaiacol 11 Corrosive sublimate 12 Veratrum viride 13 Chlorate of potassium 14 Hexamethylenamin 15 Nitroglycerin

Missouri November Report.—Dr J A B Adcock, secretary of the Missouri State Board of Health, reports the written examination held at Kansas City, November 26 28, 1906 The number of subjects examined in was 12, total number of questions asked, 90, percentage required to pass, 75 The total number of candidates examined was 69 of whom 34 passed and 35 failed The following colleges were represented

PASSED

College	Year Grad	Per Cent.
American Coll of Med and Surg Chicago	(1906)	75
Rush Med Coll	(1905) 81	84
College of P and S Chicago	(1902)	75
Johns Hopkins Med School	(1904)	79
St Louis University	(1906) 75 75 75	75
Barnes Med Coll St Louis	(1895) 75 (1906) 75 75	75
St Louis College of P and S	(1906)	75
University of Pennsylvania	(1905)	84
Meharry Med Coll	(1906) 75	75
Vanderbilt University	(1906)	77
McGill University Quebec	(1895)	75
University Medical School Dublin	(1906)	78

Undergraduates the grade of 75 was reached by six 76 by one 77 by two 78 by two 80 by two and 85 by one

FAILED

Keokuk Med Coll College of P and S	(1906) 68	69
Physio-Medico Coll of Indiana	(1900)	63
Louisville Med Coll	(1899)	47
Kentucky School of Med.	(1894)	48
St Louis University	(1906) 64 68 68	69
Ensworth Central Med Coll	(1906)	55
Barnes Med. Coll (1905) 63	(1906) 56 57 61	69
St Louis Coll of P and S (1905) 59 66	(1906) 56	67
University Med Coll Kansas City	(1906)	63
Eclectic Med University St Louis	(1906) 56	56
Washington University St Louis	(1906)	69
Meharry Med Coll	(1906) 63	64
Undergraduates 57 58 60 63 64 66 67 68 68 69		

Oklahoma December Report.—Dr J W Baker secretary of the Territorial Board of Medical Examiners, reports the written examination held at Guthrie, Dec. 26 27, 1906 The number of subjects examined in was 9, total number of questions asked 90 percentage required to pass 66 2 The total number of candidates examined was 23 of whom 22 passed and 1 failed The following colleges were represented

PASSED

College	Year Grad	Per Cent.
Northwestern University Chicago	(1905)	88 2
American Med Miss Coll	(1901)	87
College of P & S Keokuk (1878) 83	(1906)	68
University of Kansas	(1906)	79
Kentucky School of Med	(1892)	69 2
University of Louisville	(1878)	70
University of Maryland	(1906)	88 5
Boston University	(1906)	70 2
St. Louis Univ (Marion Sims Beaumont Med Coll)	(1896)	82
Washington University St. Louis	(1906)	87
Missouri Med Coll	(1881)	93 6
Cleveland Coll of P & S	(1906)	73 2
Eclectic Med Inst Cincinnati	(1889)	78
Jefferson Med Coll	(1906)	69
Coll of P & S Dallas	(1905)	71
Memphis Hosp Med Coll (1887) 69 (1900) 83	(1902)	71 5
University of Texas	(1906)	71
Chattanooga Med. Coll	(1903)	86
McGill University Quebec	(1893)	91

FAILED

Missouri Med. Coll	(1890)	54

The following questions were asked

CHEMISTRY AND URINALYSIS

1 Define (a) chemistry (b) matter (c) atom (d) molecule (e) element 2 Differentiate between chemical and physical changes in matter and illustrate. 3 Define chemism atomic weight specific gravity 4 Name the alkaline elements give symbols for the gaseous elements 5 Names two ic and two ous salts of mercury and give formulas 6 Give common name formula and uses of four zinc salts 7 Give common names of following formula $CO_2H_2O_2$ $FeSO_4$ NACL, $HGCl_2$. 8 Give chemical name and form ula of borax, marble blue vitriol rochelle salts, oil of vitriol 9 Discuss arsenic, mention its properties compounds and uses. 10 Name four normal and give in detail tests for four abnormal constituents of urine

OBSTETRICS AND GYNECOLOGY

1 Define menstruation give duration age of appearance and cessation and abnormal manifestations 2 Name and give measurements of female pelvis of fetal head 3 Give briefly the anatomy of uterus ovaries, placenta 4 Give theory of menstruation of conception 5 Name the three important forms of hemorrhage met in obstetric practice and give causes and treatment of each 6 Define ectopic gestation caput succedaneum vitellus amnion 7 Into what stages is labor divided and where does each stage begin and end? 8 How would you treat mastitis puerperal eclampsia? 9 Give in detail technic of repairing laceration of perineum involving floor of vagina. 10 How would you prepare your patient for delivery and yourself for attendance in a case of labor?

MATERIA MEDICA AND THERAPEUTICS

1 Give therapeutics of quinin iron strychnin digitalis 2 Give dosage of remedies you use in pneumonia membranous croup typhoid fever 3 Give dosage and indications for four remedies you use in jaundice rheumatism malaria 4 Give habitat preparation dosage and uses of twelve leading remedies you carry in your medicine case 5 Give indications that guide you in the use of each of the remedies you mention in answer to previous question

PHYSICAL DIAGNOSIS AND PATHOLOGY

1 Name the topographic lines of the thorax, outline and locate the heart s area of absolute dulness and the upper border of the normal liver 2. Describe the usual course of parenchymatous nephritis, also interstitial nephritis In what class of patients is the latter most frequently observed? How would you differentiate one from the other? 3 Under what conditions would occur a physiologic leucocytosis? Under what pathologic conditions would you expect to find a polymorphonuclear leucocytosis? A lymphocytosis? 4 Designate which component part of the spinal cord is involved in locomotor ataxia and describe the metamorphosis of structure characterizing the pathologic process 5 What pathologic changes occur in cirrhosis of the liver? 6 Give differential diagnosis between septicemia and pyemia 7 Give the principal diagnostic points of difference between mitral regurgitation and aortic regurgitation 8 Give differential diagnosis between scarlet fever and erysipelas in their early stages 9 Give differential diagnosis between phlebitis and lymphangitis 10 Give differential diagnosis between variola and varicella

MEDICAL JURISPRUDENCE

1 In a medicolegal sense what constitutes a dying declaration and what is necessary to make it evidence in a court of justice and how should it be taken? 2 Determine in a case of supposed infanticide whether the child was stillborn or killed after birth 3 What are the symptoms and treatment of corrosive sublimate poisoning? 4 At what period will a body float after being drowned? 5 In a case of opium poisoning what are the postmortem symptoms? 6 What is malpractice? 7 How would you treat a patient suffering from poisoning by coal gas? 8 What are symptoms and treatment for poisoning by the castor bean and what is considered a lethal dose? 9 What are symptoms of poisoning by wood alcohol and treatment for same? 10 Give symptoms and treatment for poisoning by turpentine taken internally

PRACTICE OF MEDICINE.

1 What are the intrinsic and extrinsic causes of dilatation of the heart with broken compensation? How would you treat the latter condition when very extreme? 2 Describe Bell s paralysis Cheyne Stokes respiration 3 What are the early manifestations of pulmonary tuberculosis and give your method of management in a case? 4 Give the etiology pathology symptoms treatment dietetic, medicinal hygienic and prophylactic of enterocolitis 5 Give symptoms and treatment of acute ptomain poisoning 6 Give symptoms and treatment of pulmonary edema 7 Give cause symptoms and treatment of herpes zoster 8 Name one infectious and contagious disease and give diagnosis of the diseases named 9 Describe a case of uremic coma and your treatment for same 10 Give symptoms and diagnosis and treatment of follicular tonsillitis

ANATOMY

1 Describe the femur, its articulations and state what of it are not covered by periosteum 2 Give the number of and fontanelles in the skull By what and how is each 3 Where is the rectiular elastic cartilage found? Locate cold and acromion process. 4 Give origin insertion the following muscles Trapezius, supinator longus dorsi internal oblique and gracilis. 5 Describe the ri

of the heart, give its capacity and name the valves connected with the ventricle. 6 and 7 Locate and give uses of the Fallopian and Eustachian tubes, lachrymal duct prostate gland, crystalline lens, antrum of Highmore, clitoris, spleen, ureter *suprarenal capsule* the abdominal and thoracic cavities 8 Give origin and branches of in ferior dental and the *mastoid arteries* 9 Name the bones, main muscles arteries nerves and other fascia gone through in amputat ing leg at the thigh 10 Enumerate the changes the bones of the lower jaw undergo in very aged persons.

PHYSIOLOGY

1 Define special and comparative *physiology* 2 *Name the diges* tive juices and the organs that produce them, and give their actions on bread eggs milk and butter 3 Name the ferments found in the digestive juices and give source of glycogen and dextrose 4 Give the composition of normal and healthy urine and of urine in a case of diabetes mellitus 5 Give structure and functions of the liver and kidneys 6 Where and how is urea formed? Give cause of rigor mortis 7 *How do the products of digestion find their way* into the blood? 8 What would be the results of eating in excess of albuminous oleaginous and farinaceous foods? 9 Give the changes of the air in respiration and the respiratory changes in the blood. 10 Name the heat producing tissues of the body

SURGERY

1 Diagnose, give prognosis and treatment of the following dis eases Erysipelas, rhinitis pyemia and traumatic or surgical fever 2 Describe and differentiate the following Concussion and con *tusion incised punctured lacerated gunshot and poisoned wounds,* 3 Give signs of fracture dislocation reduction and the process of repair 4 and 5 Give differential diagnosis and treatment of frac ture of the surgical neck, capsular fracture of the femur and a case of hip-joint disease. 6 Define and give treatment of tinea versicolor tinea circinata herpes zoster and scabies 7 How would you diagnose? Give prognosis and treatment of septicemia, pyemia and septicopyemia. 8 Give differential diagnosis between coma the result of an injury and that produced by opium poisoning alco holic intoxication apoplexy and uremic poisoning 9 Describe and give treatment of hydrocele hypospadias, varicocele hematocele and epispadias 10 Give symptoms prognosis and technic of the opera ation for ectopic gestation or an extrauterine pregnancy

Discussions

SURGERY OF HARELIP

(*Continued from page 759*)

DISCUSSION

DR THOMAS FILLEBROWN, Boston, said that while his long association with Dr Brown has proved the general harmony of their views, there are some points on which his personal expe rience differs from Dr Brown's Dr Fillebrown fully agreed that the closure of the fissures of the palate would be done better by easy stages, and said that he considers it entirely un reasonable to attempt to close both fissures at the same opera tion If the fissure in the palate is narrow, both hard and soft palate may be united in one operation But if it is wide, Dr Fillebrown thinks that only the hard palate should be at tempted at the first operation In all cases the cleft of the palate should be operated on first There is much more room to work and the intermaxillary can then be much more per fectly adjusted The soft palate can well be closed later Dr Fillebrown has done the Brophy operation a number of times and has never had stenosis result and has not disturbed the teeth germs when doing it properly, nor has the articulation been much disarranged He has followed with much satis faction a hint from Dr Gilmer and only approximated the parts at the first operation so that the closure can be easily completed by a flap operation a few weeks later He does not fear collapse and remembers but one patient who showed any particular depression or had temperature over 102 F after the operation The strapping of the face of the infant appeals to him and he said that he certainly shall adopt it His patients do not suffer from after effects of anesthesia, as his method of administering the anesthetic is such that the patient comes out of it all right with a good appetite and digestion He does not recall a case in which it seemed that the anesthesia caused any serious depression His method a modification of the Junker system, is giving simply etherized air He does not produce very deep anesthesia, nor does he allow the patient to become so conscious as to suffer from the shock of the operation He believes in early operations for deformities of the mouth and lips, that is if the child is normally well during the first few weeks of life

DR M I SCHAMBERG Philadelphia said that Dr Brown properly called attention to the fact that young infants are particularly susceptible to shock, in spite of advocating early operation He believes with Dr Brown that the proper course to pursue is to draw the parts gradually together, to assist the face in reaching its natural conformation prior to the per formance of the operation, and while his experience in this work has not been anything compared to that of Drs Brown and Fillebrown, he believes from observation that the best re sults can be obtained in this way

DR. M H. FLETCHER, Cincinnati, said that his experience in this kind of work has only magnified his ideas of the difficul ties always present in performing such operations, and while it has not been his pleasure to see Drs Brown and Fillebrown operate, he is sure that their methods must be a great advance over the old ones

DR E S TALBOT, Chicago, said that the pictures shown by Professor Kingsley illustrated beautifully the evolution of the jaws from fish to reptile, and from bird to mammal From con ception, the infant passes through all these evolutionary stages The fact that when a child is born it has cleft palate is evi dence that the child is a degenerate and has an unstable ner vous system In passing through the different phases of evo lution, arrest of development takes place in the palate, and often in other parts of the body, demonstrating that the child has an unstable nervous system The question naturally arises as to whether the operation should be performed early or late At time of birth, and the eruption of the first set of teeth, the child is undergoing what is known now in modern pathology as the "second period of stress," in which some tissues are develop ing and others are passing The tissues that are developing are along the line of the alimentary canal including the face, jaws and teeth From his research work, it seems to Dr Talbot that this is a very serious point The greatest care should be taken not only to prevent shock to the nervous sys tem but also to take particular cognizance of the bacteria which form in the mouth These points in modern pathology must be considered in the operation It is simply a matter of time, of recording cases, and summing up after some 200 or 300 operations have been performed, to decide whether an early operation is the proper thing, or whether operation should be performed later in the life of the child Of course, other things must be considered, such as the hygiene and the nurse

DR GEORGE V I BROWN, Milwaukee, Wis, said that he wished to explain what evidently had not been made clear by the paper The central idea intended to be conveyed, was that there can not be a perfect lip without a reasonably perfect nose, there can not be perfect speech unless these organs are perfect also The laws of Nature can not be transgressed by violent operative procedures on infants, so far as the maxillary bones are concerned, without injury to one and all of these asso ciated parts Sections of the embryo at five or six weeks, and sections showing the dental follicle in various stages will end in understanding the relation of the parts Never, said Dr Brown, let a poor mother see a new born child without the strips on its face if possible to avoid so doing It is an un necessary shock In the course of a few weeks these strips will have worked wonders by drawing the asymmetrical parts into relations much better than any surgeon can do it by forcible means

SURGERY OF NERVES

(*Continued from page 771*)

DISCUSSION

ON PAPERS OF DRS TAYLOR*, POWERS AND MURPHY

MR. CHARLES BALLANCE, London, Eng, has found that the neurilemma cell is the chief factor in the regeneration of the peripheral nerves, and that without this cell the fibers in the nervous system are unable to regenerate, hence it comes that, as we have not that little cell in the spinal cord, it is impossible, as far as we can see at present, that suture of the spinal cord can be of any service whatever The neurilemma does not enter the spinal cord with the anterior root nerves, although there

* Dr Alfred S Taylor's illustrated article on "Brachial Palsy" appeared in THE JOURNAL, Jan 12 1907

are some of the nerves of the posterior root which have some neurilemma as they enter the spinal cord How far that extends and to what extent it is possible to get a recovery of sensation after division of the spinal cord Mr Ballance can not say That is a subject which has not yet been worked out

This research with regard to the regeneration of the nerves has an important bearing on Dr Taylor's paper In 1895 Mr Ballance sutured the facial nerve to the spinal accessory That patient disappeared for a while and it was not until five years afterward that the results could be noted In that case there was complete recovery of the face, but no dissociated movement with the shoulder Mr Ballance has done a number of operations of facio-accessory anastomosis since then, and in some of these cases there has been subsequently dissociated movement, while in others it has never occurred In one of his brother's cases *dissociated movement did not commence* until three years after the operation, so that even when it does not occur early we need not despair It is obvious, of course, from the anatomic relation of the cortex, and from the relations of the centers in the medulla, that the operation which ought to be done is either a facio hypoglossal anastomosis or a glosso-pharyngeal anastomosis Professor Shafer said that the best nerve to use is the glosso-pharyngeal, but Mr Ballance came to the conclusion, as the result of the conditions he had studied on the cadaver, that the operation was so difficult that he would not attempt it Mr Ballance said that this splendid series of cases *illustrates very well the results of these operations* The best class of cases of facial palsy to operate on is not the class of cases which occur before or after operations on the mastoid Of course, sometimes the conditions existing in the mastoid influence the facial canal and so produce facial palsy, but in those cases there is no doubt but that in some there is a pyogenic neuritis which afterward interferes with a good recovery when a nerve anastomus is done The best type of cases for this operation is represented by cases of fracture of the base of the skull in which facial palsy occurs, and the palsy is permanent Here there is no sepsis and a perfect field of operation, and in these cases the best results are obtained

The operation which Mr Ballance has done is not an end to side anastomosis, but an end to end anastomosis He does not think that the individual who has a divided hypoglossal nerve suffers very much discomfort He referred to a case of punctured wound of the neck in which the only serious injury was a division of the hypoglossal nerve In that patient the tongue became atrophied on one side, but the patient did not suffer any discomfort It is so important in a facial palsy case to get a good result, that for the present, at least, he will not consider the question of the tongue and throw the whole of the hypoglossal nerve into the end of the paralyzed facial It is not a good thing sometimes, he said, to try to do too much, and in this operation he has found that whether a facio-accessory anastomosis or a facio-hypoglossal anastomosis is done, the best plan is to do an end to-end junction With the facio-accessory anastomosis, if an end to-end junction can be done, it is easy to unite the distal end of the divided spinal accessory with one of the cervical nerves in the neck that will give regeneration and not a permanent loss of power in the sterno-mastoid and the trapezius

With regard to the distal end of the hypoglossal, Dr Ballance would advise the same procedure On four or five occasions he has united the distal end of the hypoglossal to the gustatory These cases are too recent, however, to report what the result will be, but at any rate, when the attempt is made, especially in women, to give relief from this terrible deformity of facial paralysis, the best plan is to throw over all thought about the tongue and the sternomastoid, and to throw the whole hypoglossal and spinal accessory into the facial Think of that condition at first, and then afterward anastomose the divided nerve with some other nerve in the immediate neighborhood In that way regeneration of the tongue or sternomastoid will take place some months afterward and without any deformity

DR. HARVEY CUSHING Baltimore, said that experimental physiologists have devoted *a great deal of attention of late to* the part that is played in regeneration by the peripheral and the central segment, and they believe that the peripheral portion of a nerve has the power to regenerate itself *in toto* Much of this is against the doctrine of the neurone as a nerve-cell unit It is undoubted, he said, that in the peripheral segment there occurs, after division, a multiplication of the sheath of Schwann cells, that is, the cells *proliferate, and the process* is undoubtedly regenerative in character, but in the opinion of many the entire restoration of the peripheral segment can never take place without some central connections, whether they come from axones wandering out of the central ends of the same nerve, or from axones which have straggled in from the central ends of other nerves which have been divided in the approach through the tissues before the nerve under study has been reached It is Langley's view that the latter accounts for the finding by Bethe of the few anatomically perfect fibers in the peripheral segment of nerves with no apparent central connection *In order to get a functional return there must be a* connection with the central cell It is probable that the complete functional regeneration depends on a double process It seems that these proliferating cells of the sheath of Schwann play some part in drawing down the central axone possibly through a chemiotactic influence. Some experiments show this attraction very distinctly If, for example the central end of a divided nerve is conducted into a tube or quill buried in the tissues, the down growing axone will pass through the tube into the tissues beyond If, however, the peripheral segment, instead of being left in the tissues, is brought up and inserted *with the central end in the tube, the nerve fibers will start to* grow down, but will return in the tube and find their way into the end of the peripheral segment This shows that there is some influence at work, possibly akin to that mysterious force which attracts the leucocytes to a certain point of the body The sheath of Schwann cells have been shown to have "wandering" propensities, and the axones probably do likewise under some chemical influence which draws them back to their original destination In spite of the fact that this influence or attraction is constantly at work, anything that will prevent the central axone from growing down into the peripheral will pre*vent the establishment of a communication* which under ordinary circumstances will surely be made Herein lies the importance of this matter from a surgical point of view

It is a most important thing, Dr Cushing said, to prevent the intervention of a scar or the interposition of tissue between divided nerve ends In the endeavor to bring the divided nerves together by means of sutures, union is often complicated *through the presence of a foreign body which adds to the* scar formation and prevents a complete functional reunion between periphery and center Practically every incision made through any tissue divides nerves With perfect healing and perfect tissue approximation the nerves unassisted will reunite There are operations, however, after which, through methods of closure, this auto reunion is impossible, and in these operations it is most desirable to avoid injury or division of the nerves Emphasis is laid only on the importance of correct apposition of the muscles, fasciæ, etc. If the nerves to these muscles are not handled carefully or if they are divided, there will be an atrophy of these very muscles, on whose strength depends the strength of the wound Therefore, it is wise in all operations to bear in mind the presence of nerves and to save them, if possible If the nerves must be divided, and if the tissues are subsequently approximated with accuracy and heal without much scar formation, the chemiotactic principle will tend to draw down the central axon to its periphery again All that is necessary is to see that the nerves are brought into careful apposition Except for large nerves sutures are unnecessary and often undesirable

DR. W W KEEN, Philadelphia, recorded three failures from *the physiologic and surgical point of view He has three times* attempted to anastomose the facial nerve with other nerves First with the spinal accessory, in the case of a lady who had had a facial palsy dating from childhood and due to an uncertain cause In that case he was utterly unable to find any facial nerve remaining He dissected completely down to the bone but failed to find any nerve The palsy had existed some twenty five years In the second instance on a young man who had had a bullet which had destroyed it entirely I

nerve with the spinal accessory, splitting the latter and using only that portion of the nerve which went to the trapezius and not that going to the sternomastoid The third case he anastomosed with the hypoglossal Both were end to-end anastomoses Both of these patients had agreed to submit to later treatment, but they disappeared as soon as they left the hospital One of them was seen about two months after the operation and with absolutely no benefit at all, as was to be expected when postoperative treatment was neglected *

DR. JOHN B ROBERTS, Philadelphia, reported two cases he saw recently, one of which was an ischemic paralysis The first patient, a young man of 17, with very bad contraction of the hand and atrophy of the forearm muscles, was treated for a fracture in the neighborhood of the lower end of the humerus Dr Roberts has been able to obtain some relief of the contracture by lengthening the radial flexor of the wrist and transplanting the long palmar muscle from the flexor surface to the posterior region and attaching it to the ulnar side of the carpus and metacarpus The other patient, a young woman, aged 20, had had a somewhat similar condition cured many years ago by tight bandaging for fracture of the forearm In her case so much had happened since in the way of operation and various attempts at relief that up to the present time nothing has been done

DR. LEONARD FREEMAN, Denver referring to Dr Powers' paper, did not think that these cases are as rare as has been supposed He has seen five in the last two years Two of the patients he lost sight of, three are still under observation One of the five cases occurred in the lower extremity, four in the upper All the patients were children who fell and fractured the bones In two of the cases gangrene of the skin was present, showing the great pressure with which the splints had been applied. In one of the cases massage was instituted and was carried out faithfully for about twelve months This patient had very indurated muscles, with the fingers rather contracted, and there was numbness and loss of sensation in the thumb and little finger of one hand. All these symptoms disappeared in great part during the twelve months The muscles softened up and the fingers regained much of their flexibility and sensation. In one other case the sensation was not only lost in the hand and the fingers contracted, but many trophic changes had occurred in the skin with a tendency to ulceration of the fingers It seemed wise in this case to dissect down on the ulnar and radial nerves and remove them from the cicatricial muscular tissue to a place beneath the skin, which was done easily and gave immediate relief Sensation returned rapidly and the ulcerations disappeared from the skin and hand. Under the influence of massage the patient recovered almost, if not completely The fingers straightened out and the patient could use his hand with perfect ease These are the only cases presenting definite results

The best treatment, he said, would seem to be first to try massage, and if sensation does not return, the fingers straighten out, and the trophic disturbances disappear within a reasonable time then cut down on the nerves and liberate them, bringing them up beneath the skin so as to relieve pressure and lengthen or transplant the tendons as may be indicated

DR A J OCHSNER, Chicago, pointed out that in order to secure peripheral regeneration of nerves one must establish conditions favorable for the actual communication between the axis cylinders above and the axis cylinders below In cases that come to the operation late this is only possible by securing a clean, straight cross section above so that the axis cylinders project and by securing the same conditions below so that there also the axis cylinders project Then, to favor the union between the two surfaces one must, above all things avoid tension It matters very little, within reasonable bounds, how far distant the two ends may be He has united many of these cases, one of them the ulnar nerve, at a distance of seven and a half centimeters That portion of nerve had been shot away above the elbow By simply producing these conditions by uniting the severed ends of the nerve with about twenty strands of fine catgut, suturing from above down and from below upward, so that there was a bundle of catgut like a telegraph cable between the ends, the conditions necessary for the passage of the nerve were secured Within three years the conditions in the arm were so perfect that the boy was able to play the banjo with that hand

DR. F B LUND, Boston, did not agree with Dr Ochsner that it is necessary to get an end to end anastomosis When a nerve is cut, making an ordinary slit, the knife edge is pretty rough and sufficient fibers are cut off transversely to make Dr Taylor's method efficient He has operated on two patients, one of whom has had complete paralysis for four months He sutured the nerve into the hypoglossal exactly as described by Dr Taylor, and the woman made a perfect recovery The second case was a woman who had had a facial paralysis for seven years The nerve was thin and frazzled It was hard to get out and hard to handle But Dr Lund succeeded in suturing it into the hypoglossal and her face is now symmetrical in repose and she can draw it over almost as far on the paralyzed side as on the other

DR JOHN B MURPHY, Chicago, believes that the end to end approximation creates the ideal condition A lateral approximation will only approximate a few axon units because of their insulating medullary sheath Unless that sheath is destroyed there will not be a transmission of function from one extremity to the other That is definite and positive He thought that Dr Keen's experience is in striking contrast with his own in the retention of the size and vitality of the peripheral segment of the nerve Dr Murphy had the same apprehension in a case of paralysis of the posterior cord of the brachial plexus operated on twenty six years after the occurrence of the trouble The distal end of the posterior cord was as large as normal and had the typical faradic resistance in the muscles

Dr Murphy had a case of a lesser degree of paralysis from a trauma involving the upper four roots of the brachial plexus They were cut off close to the spinal foramen The electric reaction was present seventeen years after the injury, which showed that not only did the nerve continue the same size, but that there was regenerated in that nerve, without approximation or union, an axon that had faradic conductivity In another case of bullet wound where the external popliteal nerve was cut off, he operated ten weeks later and there was not the slightest faradic reaction Why? Because in the latter case the axis cylinder did not have time for reproduction of the peripheral source of supply, whereas in the other case it did have time to regenerate

Dr Cushing's remarks, he said, are instructive and they are the most positive evidence that the axon regenerates not only from the proximal side but with equal force and to an equal degree from the distal side That there is a certain chemotaxis or attraction at work is beyond question Referring to Dr Powers' paper, Dr Murphy said that there are two types of paralysis which result from pressure The flaccid paralysis always the result of suppression of function or division of the peripheral axon, the other the result of myositis which always causes contraction of the involved muscles They are both amenable to two types of treatment, and Dr Murphy emphasized two types of treatment, one where the nerve is divided completely which requires a reapproximation with resection of the bulb end and it is the omission of resection of the bulb end that gives bad results in so many cases reported in the literature If the paralysis is due to compression, that can be relieved first by liberation from cicatricial tissue the mere compression of which stops the transmission of function Second if the nerve has been compressed severely, where the nerve is infiltrated and a connective band connects the two ends then a resection of the nerve must be made In the second class of cases there are always some fibers of the muscles left and even when there is extensive contraction where the finger nails are driven into the palms of the hands, the elonga

* Dr Keen added a comment subsequent to the session saying that in closing the discussion Dr Taylor very properly called attention to the fact that functional return can not usually be expected under two months While this is true his experience is that if the post-operative treatment by electricity massage douches etc. is neglected, there will usually be no return of function even after a long time

tion of the tendons by tendoplasty very freely compensates the patient for the operation

DR ALFRED S TAYLOR, New York, did not think that Dr Keen should record his last two cases as failures, because he saw them for only two months after the operation There is no evidence of a returning nerve function from regeneration of the nerve until three months after operation So that Dr Keen may still live in hope that these cases have had their lost nerve functions restored

DR. CHARLES POWERS, Denver, said that the Volkman Leser is a definite type of a case in which the nerves are not at fault The muscles here have undergone a fibrosis and the operations on the nerves will not cause a regeneration of these muscles He believes Dr Roberts' cases were of the Volkman type In these, as in the two cases reported by Dr Ferguson of Chicago, shortening of the bones or lengthening of the tendons may do a great deal of good

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and methods of treatment for the diseases seen especially in every day practice Contributions will be welcomed from our readers]

Scarlet Fever

The specific treatment of this condition is still *sub judice* and the symptomatic management of the disease finds favor with most writers Rest in bed during the acute febrile period, and continued for one or two weeks afterward, is imperative, and great care should be taken to prevent undue chilling of the body This does not preclude, however, the judicious use of hydrotherapy for the fever

FEVER.

For mild cases with moderate elevation of temperature a tepid sponge bath once or twice daily will usually be sufficient. Heubner, in *Modern Clinical Medicine*, for cases with intense fever and associated nervous symptoms, advocates the use of repeated packs, the influence of which may be extended to an hour without causing a decided internal congestion, as in the case of cold baths, which, in his experience, are not well borne Two beds, each supplied with a sheet and woolen blanket, are necessary The cover and the sheet, which have been wrung out in cold water (at from 59 to 60 F), are spread out, the naked child is enveloped up to the neck, first in the sheet, then in the woolen blanket, and allowed to remain so for ten minutes, or, if the hyperpyrexia is intense, for fifteen minutes In the meantime the second bed is prepared in a similar manner and the child, after it has been taken from the first pack, is immediately enveloped in the second for ten to fifteen minutes, and so on for an hour, so that the decided cooling is repeated from four to six times The difference between this method of cooling and a cool bath is obvious, between the renewed coolings the sheet warms itself inside the woolen covering and the blood remains on the surface of the skin The result of the cooling is energetic. This procedure must not be used more frequently than two or three times a day In the intervening periods the child is allowed to rest

In cases in which there is marked nervous involvement, cold affusions in a warm bath are of use The duration of this (temperature from 90 to 95 F, according to the condition of the pulse) may be five, ten, or even fifteen minutes (in older children), but may be also very much shortened. The principal indication here is the cold affusion The children are comfortable in the warm fluid, which is always from 12 to 15 degrees lower than the temperature of the body From a slight height water cooled by ice is poured over the head, neck, back and chest at short intervals, according to the length of the bath, from 5 to 6 liters are to be used The external auditory meatus is closed by plugs of cotton, the parts of the skin on which the cold water is poured are gently rubbed during this procedure, as well as the trunk and extremities which remain in the bath Each affusion causes deep respiration that can not be attained by any other method, therefore, a very decided area of the lungs is influenced A number of other reflexes also occur The effect on the centers in the medulla can not be mistaken, he declares The baths are repeated four or even six times daily Usually after this procedure children will take a larger quantity of nourishment, followed by quiet sleep

Frühwald recommends the use of ice compresses or Leiter's coils to the head in cases in which there is much headache, stupor or pronounced nervousness

THROAT

Frühwald further recommends the application of cold compresses to the throat when there is marked angina with secondary swelling of the glands, and the following, to be used as a gargle or spray

℞	Acidi borici	3ss	12	50
	Acidi salicylici	gr xl	2	
	Aquæ dest	Oi	500	

M. Sig To be used as a gargle every one or two hours

℞	Acidi carbolici	m lxxx	5	
	Aquæ dest	Oi	500	

M Sig Use as gargle every hour

℞	Hydrargyri chloridi corrosivi	gr vii		50
	Aquæ dest	Oi	500	

M Sig Use as gargle every two hours

The above solutions may be used in an atomizer and sprayed into the throat at intervals If the spraying can be done correctly it is much more effectual than to have the patient gargle If diphtheria is present the usual local and constitutional measures should be employed

ELIMINATION

It is important in this disease to have all the emunctories freely opened Early in the disease, after the vomiting has subsided, the following should be given

℞	Hydrargyri chloridi mitis	gr i		06
	Olei gaultheriæ	m i		06
	Sacchari lactis	gr l	3	

M et ft chart No x Sig One powder every half hour

It is well to follow the calomel by an appropriate dose of some saline In children Rochelle salts or the solution of citrate of magnesium are to be preferred The use of water internally at regular intervals and in specified amounts is to be especially recommended Parents or nurse should be told how much water is to be given and at what intervals It should be impressed on them that this is as important as the administration of any medicine Water keeps the kidneys flushed and is an excellent prophylactic measure against scarlatinal nephritis

A saline should be administered during the course of disease in order to keep the bowels opened The following has been found useful to promote elimination by the kidneys

℞	Potassii acetatis			
	Potassii citratis āā	3ii	8	
	Syrupi limonis, B P, q s ad	fℨiii	90	

M Sig One teaspoonful every three hours This dose may be given to a child from 6 to 10 years old Each dose should be followed by half a tumblerful of water

DIET

All observers agree that scarlatinal patients should be kept on a liquid diet Frühwald states that the diet should consist of milk with a little cocoa or malt coffee, if desired, dishes prepared from milk, wheat bread, and later thick chicken or veal broth (bouillon) After the third week, if the urine is normal light meat custards green vegetables eggs, and later a little dark meat may be permitted

KIDNEY COMPLICATIONS

Rover in the *Pennsylvania Medical Journal* discusses an analysis of the kidney condition in 800 cases of scarlet fever treated with routine doses of chloral hydrate contrasted with 756 cases in which the usual remedies were employed, and reaches the following conclusions

First Chloral hydrate is of distinct value in the treatment of scarlet fever, and when used in doses of sufficient size to secure light somnolence does not to be a [illegible]tory depressant.

Second Chloral hydrate ameliorates nervous symptoms bet ter than any remedy yet suggested in the treatment of scar latina

Third. Chloral hydrate allays the itching of the skin often found annoying in scarlet fever

Fourth When chloral hydrate is given as a routine measure during the febrile period, and for some days thereafter, post febrile nephritis appears to be less frequent

Fifth This study would seem to justify the more extended use of chloral in the treatment of scarlet fever, and a more detailed study as to how it acts on the kidney itself

(This subject will be continued)

Rheumatic Joints

Pouchet, in *Le Progrès Médical*, recommends the following combination as a counter irritant and absorbent application to rheumatic joints

℞	Acidi salicylici		
	Olei terebinthinæ, āā	ʒiss	6
	Adipis lanæ		
	Adipis benzoinati, q s ad, āā	℥iss	75
M	Sig Apply locally to joints once or twice daily		

Potassium Chlorate in Hay Fever

A letter from Holland in the *Wien Klin Rundschau* for January 27 states that the well known ophthalmologist of Leyden, Professor Koster, has long suffered from hay fever and derived little benefit from any treatment, even from the anti pollen sera As a last resort he used a 3 per cent solution of potassium chlorate, gargling with it and instilling it into the nose and conjunctival sac, three times a day, during the season This warded off the attacks entirely, and when, on suspension of the treatment, an attack was impending, he was able to abort it with a 5 per cent solution or insufflation of 0 1 or 0 2 gm potassium chlorate directly into the throat once or twice a day His success, it is said, was so pronounced with these measures on himself and others that he applied the 3 per cent solution in treatment of conjunctivitis of other origins and this has become a favorite method of treatment of conjunctivitis in Holland The possibility of kidney irritation through continued usage should be remembered

Benzin Arrests Transient Redness of the Nose

F Bruck states that a single appli ation of petroleum benzin on cotton or lint will at once arrest the tendency to redness of the nose from strong coffee or tea, emotions, or ex posure to cold or heat, observed in some individuals The benzin will also abolish the shiny aspect of the nose occurring with the hyperemia or without it The benzin impregnated cotton is pressed on the spot for a few seconds, without rub bing, covering merely the reddened parts and taking care not to allow the benzin to get into the eyes, nostrils or mouth In a communication on the subject to the *Med Klinik*, Feb 3, 1907, Bruck states that the petroleum benzin does not have the slightest irritating action on the skin, and is by far the best method of cleansing the skin in acute eczema or similar conditions

Medicolegal

"Practice of Medicine" Without Drugs

The Supreme Court of New York Appellate Division, First Department, affirms, in the case of People vs Allcutt, a judg ment convicting the defendant of the crime of practicing medi cine without being lawfully authorized and registered The court says that the evidence tended to establish that in the window of the defendant's residence was exhibited a sign, "Dr E Burton Allcutt, Mechano Neural Terapy," that on the bell outside the door was the name "Dr Allcutt," that in the office building in which he had an office there appeared on the directory in the hall, "Dr E. Burton Allcutt," that he had and distributed a card reading, "Dr E. Burton Allcutt, me chanoneural therapy," giving two addresses with office hours at each and 'phone number, and that his receipt for services rendered was signed "Dr E. Burton Allcutt"

The evidence in this case further tended to establish that the complaining witness visited the defendant at the office address given, that he said he was Dr Allcutt, and, "I usually see all my patients up town in the afternoon and I am down in this office in the morning" The witness having said that she was troubled with severe headaches, was nervous and had frequent spells of vomiting, the defendant told her that he wished her to remove her corsets in order to examine her thoroughly to find out what her trouble was He examined her chest, heart and back by placing his ear to her heart, he tapped with his fingers The witnesse asked, "Doctor, I also have a very severe pain in my left arm, do you think it is rheumatism?" He said, "You are entirely too young to have rheumatism, it is from your stomach, you have malaria and stomach disease" She said to him, "Can you cure me?" The defendant said, "Certainly I can You will have to take twelve treatments, which will cost $25 in advance" He said he gave no medicine at all, but quieted the nervous system He was asked if he called at patients' residences, and he replied, "Certainly" Witness asked, "Doctor, can you cure all kinds of diseases without drugs?" He said, "Yes, I find I can cure without drugs, I can cure all diseases that any phy sicians can cure without drugs, and also diseases that they can not cure with drugs" He said that he had practical medi cine, that he had given up drugs, that he could cure anything that physicians cured. The witness then paid $5 for the exam ination and received a receipt Subsequently the defendant called at her residence in response to a telephone call The witness told him that she felt ill all day, that she had a chill and had been vomiting, had a pain in the region of her abdo men The defendant took hold of her hand, felt of her pulse, looked at her tongue, examined her throat and said "It is all from your stomach I want you to drink a quantity of luke warm water with salt in it" He gave it to her in spoonfuls He said, "You must not eat pork or potatoes or any kind of sweets," and then said, "I will give you a treatment" Wit ness testified that the defendant started to treat her back with his fingers, he said he was treating her nerves, he treated her spine by putting the fingers on her spine, the ends of the fingers, a touching sensation, nothing like kneading, he did this for about an hour He varied that treatment, on the neck, breast, heart and stomach in the same way, just by his fin gers He advised her in case she had pains in the night, if the pain in her abdomen were severe, to place an ice bag on it and one on her feet, and if her bowels troubled her to place a hot water bag on her back and go to bed, not to lie on the couch, and if she got any worse to send for him Her hus band asked him, "Doctor, what are you doing?" He replied, "I am treating her nerves Don't you see how quiet she is now?" Five dollars was paid for that visit. The witness tes tified that as a matter of fact there was nothing the matter with her, and that she was acting during these interviews as a detective

The defendant in his own behalf testified that he practiced the art of mechano neural therapy and that he was a gradu ate of a college of mechano neural therapy It was conceded that such college was not recognized by the Regents of the State of New York, and that a diploma of that institution would not give the right to practice nor to an admittance to an examination to determine the fitness of such a person to practice medicine, and that the defendant was not registered as a physician in the County of New York The defendant also testified that prior to his attendance at said college he had been practicing massage, and was a graduate of the Mills Training School, attached to Bellevue Hospital, and had en gaged in his profession as a nurse, that the statement of the complaining witness was substantially correct, that he had not studied medicine, except from the standpoint of a nurse, that mechano neural therapy means mechanical nerve treat ment, a gentle pressure on all parts of the body, that the whole theory of this science is that disease comes from lack of blood circulation, and that the treatment proceeds on the theory of assisting the circulation back into normal condition

The contention of the defendant was that, conceding all the facts proved, he was not guilty of the crime charged, inas much as he was not practicing medicine within the meaning

of the statute, in that he neither gave nor applied drugs or medicine nor used surgical instruments

Section 153 of the New York Public Health Law (Chap 661 of the Laws of 1893) provides as follows "Any person who, not being then lawfully authorized to practice medicine within this state and so registered according to law, shall practice medicine within this state without lawful registration shall be guilty of a misdemeanor"

Continuing, the court says that to confine the definition of the words "practice medicine" to the mere administration of drugs or the use of surgical instruments would be to eliminate the very cornerstone of successful medical practice, namely, the diagnosis It would rule out of the profession those great physicians whose work is confined to consultation, the diagnosticians, who leave to others the details of practice Section 146 of the Public Health Law provides that persons desiring to practice must pass a Regent's examination made up of "suitable questions for thorough examination in anatomy, physiology and hygiene, chemistry, surgery, obstetrics, pathology and diagnosis and therapeutics, including practice and materia medica" Diagnosis would, therefore, seem to be an integral part of both the study and practice of medicine, so recognized by the law as well as common sense. The correct determination of what the trouble is must be the first step for the cure thereof It is a well known fact that the disease popularly known as consumption may, if discovered in time, be arrested, if not entirely eradicated from the system, by open air treatment in the proper climate, and that in such cases use of drugs has been practically given up Would the physician, in such a case, who by his skill discovered the incipient disease, advised the open air treatment and refrained from administering drugs, not be practicing medicine? It may be difficult by a precise definition to draw the line between where nursing ends and the practice of medicine begins, and the court should not attempt, in construing this statue, to lay down in any case a hard and fast rule on the subject, as the courts have never undertaken to mark the limits of the police power of the state or to have precisely defined what constitutes fraud. What the courts have done is to say that given legislation was or was not within the limits of the police power, or that certain actions were or were not fraudulent

The defendant particularly relied on the case of Smith vs Lane, 24 Hun 632, decided in 1881, and cited five cases in other states as in harmony with it But the court does not consider the remarks of the judge in Smith vs Lane as being an exhaustive or exclusive definition of the term "practice of medicine" And it says that State vs Lifring, 61 Ohio St 39, was under the peculiar language of the statutory definition which was held to require the use of drugs in order to constitute the practice of medicine There was subsequently an amendment of the Ohio statute, and the subsequent cases of State vs Gravett, 65 Ohio St 289, and State vs Marble, 72 Ohio St 21, were decided the other way State vs Herring, 70 N J L 34, was also decided on the wording of the statute Nelson vs State Board of Health, 57 S W 501, a Kentucky case, and State vs McKnight, 131 N C 717, are not entitled to be considered authorities in this jurisdiction, inasmuch as they proceed on the proposition that in those states it would be unconstitutional for the legislature to limit the right to practice medicine—a doctrine counter to that held in the rest of the Union With the Christian scientist case of State vs Mylod, 21 R. I 632, the court contrasts that of People vs Pierson, 176 N Y 201 It also says that, as opposed to the cases following Smith vs Lane, the courts of Massachusetts, Maine, Michigan, Iowa, Missouri, Colorado, Nebraska, Illinois, Ohio, Alabama, Indiana, New Mexico, South Dakota and Tennessee, refuse to restrict the "practice of medicine" to the administration of drugs or the use of surgical instruments It cites the case of Bragg vs The State, 134 Ala 164, and says that in that case and in the note to O'Neill vs State, 3 L. R. A, N S, 762, may be found collected the cases in the several states as indicated above, which did not follow the definition of practice of medicine as limited and restricted in Smith vs Lane

Finally, the court says We are of the opinion, from the general current of the authorities throughout the country and from examination of the history and growth of our own public health statutes, that we should not apply the rule as claimed to have been laid down in Smith vs Lane. When we find, as in this case, a defendant holding himself out by sign and card as a doctor, with office hours, who talks of his patients and gives treatments, who makes a diagnosis and prescribes diet and conduct and remedies, simple though they be, and who asserts the power to cure all diseases that any physician can cure without drugs and also diseases that they can not cure with drugs, and who takes payment for a consultation wherein there was an examination and determination of the trouble, that is, a diagnosis, as well as payment for subsequent treatment,even if no drugs are administered, we must hold that he comes within the purview of the statute prohibiting the practice of medicine without being lawfully authorized and registered

The judgment of conviction should, therefore, be affirmed

Expressions and Appearances

The Court of Civil Appeals of Texas says, in St Louis & San Francisco Railroad Co vs Boyer, a personal injury case against the railroad company, that the suffering of a party in many cases can only be ascertained by expressions of the party himself, and, this being the best evidence of which it is susceptible, such evidence is admissible if such expression is usual and natural under such condition Whether or not the plaintiff in this case was feigning was for the jury to determine, and whether or not the expressions in question were made some time after the accident did not affect its admissibility, but might affect the weight that should be given to it The court also holds that, under all the authorities, testimony as to the appearance of a party is admissible It says that ordinarily it would be impossible for a witness to give to the jury such a description of the person's condition or state facts from which a jury could tell whether a person was sick or well, yet a witness by reason of being with a party and observing his conduct, manner and appearance might form an opinion of the party's condition in that regard. While per force of the situation it is but a conclusion, the authorities hold such an opinion is admissible by reason of the situation itself The weight given to such testimony depends, of course, on the intelligence and opportunity of the witness in forming an opinion

Liability for Wrecking of Nervous System by Fright.

The Supreme Court of North Carolina says that in the personal injury case of Kimberly and wife vs Howland, where it affirms a judgment for the plaintiffs that the defendant was blasting rock with dynamite at about 175 yards from the plaintiffs' residence and a rock weighing about 20 pounds from one of the blasts crashed through a portion of such residence It was true that the defendant did not know, at the time he fired the blast, that the wife was lying in bed in her home in a pregnant condition, but he or his agents knew it was a dwelling house, and that in well regulated families such conditions occasionally exist While the defendant could not foresee the exact consequences of his act, namely, wrecking the wife's nervous system and nearly producing a miscarriage, he ought, in the exercise of ordinary care, to have known that he was subjecting the plaintiff and his family to danger and to have taken proper precautions to guard against it

It was argued in this case with much earnestness and ability, backed by most respectable authority, that the wife's injuries, if she sustained any, were the result of fright without any contemporaneous physical injury, and that she could not recover for them This brought the court to the consideration of a question concerning which, it says, there is much conflict among the authorities But it says that it will not undertake to either reconcile or review them All the courts agree that mere fright, unaccompanied or followed by physical injury, can not be considered as an element of dam[illegible] The testimony offered in behalf of the p[illegible] ve that the wife was lying on her bed [illegible] moment the rock crashed through it did not strike her, it greatly sh[illegible] nearly caused a miscarriage, and t[illegible]

from the effects of it If this testimony was believed, the injury to the wife was a physical injury resulting from shock and fright and directly traceable to it

There was much conflict of evidence, but the plaintiffs' testimony tended to prove that, had not the rock crashed through the roof, the wife would not have endured the nervous physical pain and suffering which had followed The nerves are as much a part of the physical system as the limbs, and in some persons are very delicately adjusted, and, when "out of tune," cause excruciating agony The court thinks that the general principles of the law of torts support a right of action for physical injuries resulting from negligence, whether wilful or otherwise, none the less strongly because the physical injury consists of a wrecked nervous system instead of lacerated limbs Injuries of the former class are frequently more painful and enduring than those of the latter But the jury was correctly instructed to allow nothing because of any mental suffering on the part of the husband

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

The Medical Record, New York.
February 16

1 *Supernumerary Cervical Ribs and Their Effects on the Brachial Plexus and Subclavian Artery C. K. Russel Montreal
2 *Conquest of Cancer R. Bell London
3 *Intranasal Conditions Bearing on the Etiology of Diseases of the Ear G Hudson Makuen Philadelphia
4 *Streptococcus Pneumonia. G W McCaskey Fort Wayne Ind.
5 *Report of Three Epidemics of Measles with Particular Reference to Koplik s Symptom C J Dillon New York
6 *Radical Cure of Trigeminal Neuralgia by Peripheral Operations. A V Moschowitz, New York.
7 *Pneumonia in Children Its Successful Management by Hydriatic Measures. W P Worster, New York

1 **Supernumerary Cervical Ribs**—Russel calls attention to certain clinical symptoms which may be caused by the pressure of supernumerary cervical ribs on the cervical plexus He reports the histories of several cases In the first case the patient complained of pain and cramp in the right hand and arm There was wasting of the thumb muscles and general weakness of the right hand The right hand was always colder than the left. The symptoms were gradually progressive The supernumerary rib was removed The operation so far has proved very successful The patient has had no return of the neuralgic pains or cramps In another case quoted by the writer the fingers became gangrenous Amputation first of the fingers and later of the arm became necessary The patient finally committed suicide It has not yet been determined whether the abnormality was really a cervical rib or an undeveloped first thoracic rib

2 **Conquest of Cancer**—Bell refers to the recent work of Beard in relation to the trypsin treatment of cancer He considers it of the first importance in the treatment of cancer to aim at restoring the functional activity of the thyroid gland and at the same time to adopt measures which will reduce the tendency to the introduction of toxic materials from the intestines This can be accomplished only by adapting the dietary to the requirements of the body, and to the capability of the digestive organs completely to digest and to assimilate the food aided by the thorough evacuation of the effete matter at least once in twenty four hours The thyroid, however is not the only organ whose utility is impaired It is likely, he states that the pancreatic secretion is to a certain extent in abeyance, and, as a rule, the proportion of hydrochloric acid in the stomach is greatly diminished.

3 **Intranasal Conditions and Ear Diseases.**—According to Makuen it is not generally recognized that diseases of the ear, especially in their interval stages, are largely dependent on intranasal conditions

4 **Streptococcus Pneumonia.**—McCaskey reports a case of pneumonia, with characteristic onset and typical signs, which was clearly due to a streptococcus infection.

5 **Koplik's Sign in Measles**—Dillon believes that Koplik's sign is a constant, definite, early diagnostic sign of measles of greater diagnostic value when present than even the rash In 221 cases observed from the period of incubation well into convalescence it was definitely absent only twice.

6 **Radical Cure of Trigeminal Neuralgia.**—Moschcowitz reports three successful operations for trigeminal neuralgia The nerve was carefully isolated and divided, the accompanying vessels were treated in a similar manner and then a silver button of suitable size was driven into the foramen so as to fill it completely The overhanging flat top of the button is moulded to the underlying bone so as to make the closure absolutely tight.

7 **Pneumonia in Children.**—Worster advocates hydrotherapy in the treatment of pneumonia in children

New York Medical Journal
February 16

8 *Physical Processes of Immunity and Infection J Wright, New York
9 *District Nursing and Extra Diet in Treatment of Tuberculosis H L. Shively New York
10 *Cases Allied to Amaurotic Family Idiocy with Remarks on the Pathogenesis of the Affection A. Gordon Philadelphia
11 *Splenectomy with Report of Five Successful Cases. W P Carr Washington, D C.
12 *Typhoid Complicated by Infiltration of the Larynx and Edema of Glottis L. N Boston Philadelphia.
13 *How Long Shall the Patient Stay in Bed After Abdominal Section J Vance El Paso Texas.
14 *Splanchnoptosis K C Mead, Middletown Conn
15 Common Fallacies in Diagnosis of Diseases of Childhood. K H Goldstone, New York.

8 **Infection and Immunity**—This is the first of a series of papers in which Wright expects to make it clear why in all probability the facts stated by him in previous papers as to the occurrence of infection and the absorption of bacteria can better be investigated in the light of the laws of physics than in that of chemistry The present paper is devoted to a discussion of the conditions and activities of the mucous surfaces of the upper air passages

9 **District Nursing and Extra Diet in Tuberculosis**—Shively discusses the methods of nursing and the diet given in the treatment of tuberculous patients at the Presbyterian Hospital Dispensary in New York The result has been a very satisfactory one

10 **Amaurotic Family Idiocy**—Gordon gives the histories of two patients who showed distinct changes in the thyroid gland, in one the gland was enlarged, in the other it was not palpable One patient was a boy, 9 years of age, the other a girl, a sister of the patient, 13 years of age The stigmata of degeneration were very extensive The boy presented among many other stigmata a very unusual anomaly, namely, polydactylism of all four extremities

11 **Splenectomy**—Carr believes that if his method of operation for removal of the spleen be carried out carefully, the occurrence of hemorrhage, shock and sepsis will nearly be eliminated The position of the patient is important. A large sand bag should be placed under the back, under the upper end of the spleen, and the foot of the table lowered about six inches The incision may be median or through the left rectus muscle Carr prefers the latter The incision should be ample, and, if necessary, a transverse incision may be made from the upper end of the primary wound parallel to and half an inch below the lower border of the ribs Before attempting to isolate and deliver the spleen a careful examination should be made to determine whether this is possible. If not, the operation should be abandoned Having decided on continuing the operation, Carr proceeds as follows

The splenophrenic ligament should be first attacked The operator, covering the spleen with gauze, draws it to the right, while an assistant draws the left lip of the wound to the left, this exposes the bed of the spleen and vault of the diaphragm. The spleen may be firmly held in its bed by atmospheric pressure This is an important fact to remember When it can be done, the splenic ligaments and all vascular adhesions should be doubly ligated in sections and cut between the ligatures, but when this is difficult the ligaments may all be clamped and the blood supply entirely cut off in this way

The spleen may then be removed and the clamps afterward sewed round and removed, as the broad ligament clamps are usually removed in oöphorectomy In difficult cases with extensive adhesions it is possible to grasp all the gastrosplenic ligament between the index and middle fingers of the left hand and to apply a long curved rubber covered clamp As this ligament contains the chief blood supply of the spleen, the danger of severe hemorrhage will be greatly lessened by securing it first in this manner The other ligaments may then be clamped or ligated and cut, after which adhesions may be rapidly separated and the bleeding controlled by gauze packing

Carr pleads for early removal of all enlarged spleens beginning to cause symptoms, unless the operation is contraindicated He reports five cases of splenectomy—one for ruptured malarial spleen, one for gunshot wound with uncontrollable hemorrhage, one believed to be simple hypertrophy, one for Banti's disease, and one for hypertrophy of a soft inflammatory nature which could not be diagnosticated. All the patients recovered from the operation and all were cured, except one, who was suffering from cachexia and debility, which continued after the operation and caused his death three months later

12 **Typhoid with Laryngeal Complications**—Boston reports the case of a man who developed symptoms simulating those seen in membranous croup during the eighth week of typhoid A tracheotomy had to be performed to give the patient relief from the respiratory distress Examination of the throat showed a decided infiltration of the mucous membrane of the larynx, and a variable amount of edema of the glottis

13 **Stay in Bed After Abdominal Section.**—As suitable cases for the out of bed treatment of abdominal section, Vance mentions those in which traumatism within the peritoneum is slight, those in which Nature does not require rest Above all, he states, the patient must not be sick Vance urges great care in the selection of these cases, because he has found that union of the abdominal wound may not be strong enough to withstand the intra abdominal pressure of sneezing or coughing even so late as the twelfth day

14 **Splanchnoptosis**—Mead has treated 40 cases of splanchnoptosis with an adhesive belt or elastic bandage with good results Twenty of these patients had a retroverted uterus, some simple, some complicated, for which they wore pessaries or tampons during the time in which they were wearing the abdominal supporters Most of these patients no longer needed a uterine support after six months Two of Mead's patients were men who complained of indigestion The adhesive belt gave entire relief from symptoms

Boston Medical and Surgical Journal

February 14

16 *Treatment of Tuberculosis of the Hip Joint J D Goldthwait Boston
17 *Statistics of Indigestion in Dermatologic Patients C J White

16 **Treatment of Tuberculosis of the Hip**—Goldthwait lays down the principles that are of importance in the treatment of tuberculosis of the hip Special forms of apparatus or other technical features are not advocated He emphasizes the value of general hygienic measures, outdoor life, protection of the point from irritation with as little interference with joint function as possible In the early cases of hip joint tuberculosis, before deformities have developed Goldthwait puts on a plaster of Paris spica bandage extending from just above the knee to just above the crests of the ilia the hip being in a position of physiologic rest This controls the muscle spasm The position practically consists of about 20 degrees of flexion 15 to 20 degrees of abduction and 10 degrees of outward rotation The patient should be encouraged to walk about bearing the weight on the leg The plaster of Paris dressing should be removed in one or two months, and should be reapplied until evidence of active disease as shown by pain and muscle spasm, has passed When this time is reached a splint made of stiffened leather of the same shape as the plaster splint is applied In a short time if all goes well, the splint should be omitted at night and gradually can be entirely discontinued

In the more acute cases and those of longer duration, Goldthwait advises rest in bed with traction until the desired position can be attained In the advanced cases associated with much destruction of tissue, or when it may be deemed desirable to remove the focus of disease in order to bring about more rapid healing, or when conservative measures fail to reduce existing deformities, surgical intervention is indicated Goldthwait urges that in all of these cases an attempt should be made to increase the resistance of the individual to the disease, as is suggested by the theory of the opsonins

17 **Indigestion in Dermatologic Patients.**—Being convinced that many chronic dermatoses may be due to errors of metabolism, White undertook to investigate the powers of stomachic digestion of 438 men and women who suffered from some skin disease During this period of investigation 61 different diseases were diagnosticated in these 438 patients The following summary represents the results of White's study

1 Fifty nine per cent. of hospital seeking skin patients have one or more symptoms of stomachic indigestion
2 Fifty two per cent of the men are so affected against 65 per cent. of the women.
3 Americans head the list of dyspeptics with 62 per cent while the Irish follow with 57 per cent. and the Russian or Polish Jews present 55 per cent.
4 Eructations are the most prevalent symptoms of dyspepsia and occur in 39 per cent regurgitation in 36 per cent epigastric weight in 31 per cent. and pain in 19 per cent
5 Our established ideas as to the digestibility of certain classes of foods and as to the indigestibility of certain special articles are correct.
6 Our previous etiologic association of certain dermatoses with dyspepsia is substantiated with one exception for whereas our present standard is 59 per cent we have found in acne rosacea 71 per cent in acne vulgaris (the exception just mentioned) 55 per cent. In eczema 64 per cent. in eczema seborrhoicum 85 per cent in pruritus 85 per cent. in seborrhea 83 per cent and in urticaria 85 per cent.

St Louis Medical Review

February 9

18 *Selection of Anesthetics P Y Tupper St Louis
19 *Use of Local Anesthesia W Bartlett St. Louis
20 *Ether Anesthesia by the Open Method H S McKay St Louis
21 Being Sick Considered as a Business of the Patient A L Benedict, Buffalo

18 **Selection of Anesthetics**—Tupper emphasizes the danger attending the administration of any general anesthetic and urges careful selection in the choice of the anesthetic and of the anesthetist He says that the worst anesthetic, if well given, is fairly safe the best, if badly given is full of danger

19 **Local Anesthesia.**—A relatively small number of operations are performed by Bartlett under local anesthesia He uses eucain in the case of all patients who refuse a general anesthetic and when operating for an exophthalmic goiter, when the pulse is under 120 He also employs it in work on the fingers and toes, and when nerve blocking must be resorted to

20 **Ether Anesthesia by the Open Method**—McKay claims that if ether is given on an open mask, as he has been in the habit of doing, it would be difficult to produce death in the time required for an ordinary operation, as a sufficient quantity of ether would scarcely be retained on the mask He describes his method as follows

An ordinary Esmarch chloroform inhaler is covered with three or four layers of gauze over which is placed a piece of thin cloth A towel folded three or four times is placed over the patient's eyes to prevent irritation from the ether Ether is then slowly dropped on the mask, which is held slightly away from the face until the patient is somewhat accustomed to the fumes The attention of the patient is diverted from the anesthetic by talking to him while the mask is slowly lowered over the nose and mouth Considerable space is left between the mask and face where air enters freely After a very short time this space is lessened by placing a towel around the portion of the mask which does not fit snugly around the face and the amount of ether is increased Ordinarily surgical anesthesia is obtained in five minutes If the patient should struggle or hold the breath as the amount of ether is increased remove the mask allowing plenty of air and very shortly normal respiration is resumed and the ether may be continued without further trouble One-half hour previous to beginning the anesthetic a hypodermic of ¼ grain of morphin and 1/120 grain of atropin is given the patient This serves to quiet him and there is rarely the troublesome secretion of mucus so frequently met unless this is given The amount of the anesthetic is greatly reduced and many times it is possible to do major operations with only primary anesthesia.

Lancet Clinic, Cincinnati.

February 17

22 Forceps M A. Tate Cincinnati
23 The True Cause of Functional N C Memphis
24 Pathology of Idiopathic Epilepsy Ind.

Medical Herald, St Joseph.
February

25 *New Retention Suture in Operation for Cleft Palate. J P Lord Omaha
26 Chairman's Address Medical Association of the Southwest H L Alkire Topeka
27 *Adenoids F Vinsonhaler Little Rock, Ark.
28 Eye Complications of Nephritis E E Hamilton Wichita
29 Ophthalmology and a Few of Its Contributors. J R Hamill Guthrie Okla
30 *Use of Lead Styles in Treatment of Stricture of Nasal Duct H Moulton Fort Smith, Ark
31 *Ophthalmic Neuroses of Menstrual Origin. R E Runkle El Reno Okla
32 Mastoid Surgery H C Todd Oklahoma City
33 *An Unusual Ear Case. E. S Ferguson Oklahoma City, Okla.
34 Value of Certain Silver Salts in Ophthalmic Practice. A W McAlester Jr Kansas City Mo
35 Dr John Thompson Hodgen A. Van Meter Lamar Mo

25 **New Retention Suture in Cleft Palate Operation**—Lord has devised a substitute for the lead plates generally used in operations for cleft palate Lead wires are covered with rubber tubing, and over this tubing is tied the retaining suture of celluloid linen It is waterproof and is not likely to become septic Subsequently Lord devised buttons to take the place of the cylinder

27 **Adenoids**—Vinsonhaler discusses the treatment of adenoids Speaking of the anesthetic he says that he prefers nitrous oxid gas followed by ether, not only for removal of adenoids, but also when a tonsillotomy must be done

30 **Lead Styles in Stricture of Nasal Duct.**—In cases of obstruction of the nasal duct in which syringing and probing fail to give any relief to the patient, Hamill has obtained good results from permanent dilatation of the duct with lead styles He makes these styles from lead wire, fitting the style to the canal After the first few hours the patient will not be conscious of the style and it may be worn indefinitely Hamill has left the style in place for as long as a month without removal In one case the patient was forced to have the style in the canal for a year and a half before it was finally and permanently removed

31 **Ophthalmic Neuroses of Menstrual Origin**—Runkle says that the severity of visual disturbances which are dependent on the menstrual function and its anomalies seem to rest on the extent of the departure from the normal condition of the sexual organs, that is, the greater the variation from the normal condition of the uterus and its appendages, the greater the ocular involvement proportionately

33 **Unusual Ear Case.**—For about six years Ferguson's patient complained of a distinct ticking sound in the left ear similar in character to the ticking of a watch, about twice the rapidity of the heart beat, but slightly irregular The ticking can also be heard by an examiner at a distance of one foot from the ear Hearing is almost lost. Treatment of various kinds has failed to give any relief Ferguson suggests that the condition may be one of spasmodic contraction of the tensor tympani muscle

Journal of Experimental Medicine, New York.
January 23

36 *Calcification of Breast Following Typhoid Abscess W S Thayer and H H Hazen.
37 Toxins and Antitoxins—Snake Venoms and Antivenins T Madsen and H Noguchi.
38 Leukolytic Action of Blood Serum of Leukemia Treated with Roentgen Ray and the Injection of Human Leukolytic Serum in Leukemia. J A. Capps and J F Smith
39 *Cytology of Multiple Non Inflammatory Necrosis of Liver and Certain Related Degenerative Changes in Cells D Symmers
40 *Experimental Atresia of Ureter T Sollmann W W Williams and C E. Briggs Cleveland, Ohio
41 *Hydronephrosis of Right Kidney Congenital Atresia of Left Ureter and Marked Atrophy of Left Kidney D P Allen and H P Parker, Cleveland
42 Electrical Charge of Toxin and Antitoxin. C. W Field and O Teague New York
43 Cause of Increased Portal Pressure in Portal Cirrhosis F C Herrick Cleveland

36 **Calcification of Breast Following Typhoid Abscess**—Thayer and Hazen report the case of a negress who, during a severe attack of typhoid, developed an abscess on the breast from which *Bacillus typhosus* and *Staphylococcus aureus* were obtained on culture Eleven days after opening the abscess and packing with iodoform gauze, a deposit of calcium appeared in the granulation tissue bordering the wound which rapidly increased until the rim of the opening and the lining granulation tissue were converted into a hard, calcareous mass Several nodules of a similar character appeared also in other parts of the breast The abscess appeared eleven days after the injection of 5 grams of calcium chlorid under the breast and after the total ingestion of 132 grams of calcium lactate during a period of eleven days The iodoform packing was removed after a month, and the patient was put on a carbohydrate free diet for twenty four days Under this treatment the abscess almost entirely healed, with complete disappearance of the deposit of calcium Studies of the intake and output of calcium showed that during three days under a diet of milk and eggs, there was a material calcium retention, that during two periods, amounting to three weeks in all, under a carbohydrate free diet, there was a marked excess of calcium elimination over the intake, and that during *the ten days following the last carbohydrate free period*, under a normal diet, there was a retention of calcium The disappearance of calcium from the breast was associated with the carbohydrate free diet and the excessive elimination of calcium The findings in this case are strongly suggestive of those produced experimentally in animals by von Kössa, who found that in rabbits in which the calcium content of the blood has been artificially increased, it is possible to bring about calcification with doses of iodoform essentially smaller than those required under ordinary circumstances

39 **Cytology of Multiple Non-Inflammatory Necrosis of Liver**—Symmers, from a morphologic study of cytolysis, concludes that there are two definite types of structural changes in cells in those pathologic processes which seem to depend on cytolysis One is characterized by rapid, simple solution of the hyaloplasm with preservation of the cell reticulum, and the other by alteration of the hyaloplasm and reticulum with the formation of amorphous material, both the cell and nuclear membranes remaining very resistant Extreme tenacity of the cell membrane seems to be the most constant single feature of all forms of cytolysis thus far recognized Polychromatophilia is associated with solution of the hemoglobin of the red cells, and possibly it may be physiologic as well as pathologic. If the former, in the earlier developmental stage of the red cells it may represent an attempt on the part of the organism to dispose of an excess of such cells by solution, or the cells may not yet have received their full supply of hemoglobin

40 **Experimental Atresia of Ureter**—Sollmann, Williams and Briggs ligated one ureter in each of four dogs to study the functional changes produced in the kidney Examinations of the kidneys were made from 31 to 185 days after the operations In each case the renal pelvis on the side operated on was distended with fluid which was found to consist of a transudate, poor in proteids, but somewhat enriched in chlorids and perhaps in urea, phosphates and sulphates, a small quantity of pigment also was retained The authors conclude that the fluid is probably formed by filtration through a filtering surface not freely permeable to proteids, and that a process of reabsorption also goes on simultaneously in such a manner that the soluble solids are somewhat increased (perhaps to counterbalance the osmotic value of the serum proteids) There is no evidence that the remaining specific renal elements play any part in the formation of this fluid The anatomic findings of these observers agree with those reported by other investigators

41 **Hydronephrosis of Right Kidney**—Allen and Parker report the case of a boy who died of uremia 13 years after an operation for hydronephrosis of the right kidney in which, because of the patient's poor condition, the cavity was drained through the abdominal wall instead of being excised For a few weeks after the operation a little urine was occasionally passed by the urethra, but later it was passed only through the opening in the side At autopsy there was found a complete stenosis of the right ureter at its renal end, produced by a fan shaped mass of fibrous tissue, with hemorrhagic pyelonephrosis and marked distension of the right kidney In addition there was found a congenital atresia of the left ureter

associated with a marked atrophy and a chronic interstitial nephritis of the left kidney

Yale Medical Journal.
February

44 Etiology of Syphilis. G Blumer New Haven
45 New Haven Milk. C J Bartlett, New Haven
46 Case of Renal Calculus, Nephrotomy, Recovery J B Boucher Hartford, Conn
47 *Unusually Large Urinary Calculus. A. R. Diefendorf New Haven.

47 **Large Urinary Calculus**—Diefendorf reports the case of a man who at the age of 43 began to suffer from paranoia One year before the onset of his mental disease he was treated for pyelitis of the right kidney Twelve months after the onset of his mental disease the patient passed a series of small urinary calculi, the largest one eighth inch in its longest diameter From this time he passed an occasional calculus, but it was always of small size and rarely caused any inconvenience At the age of 47 the man began to complain of pains in the stomach which continued for five years, when cachexia made its appearance and it became evident that he was suffering from carcinoma of the stomach He died of that disease six months later At the postmortem a small carcinomatous growth was found involving the pylorus, but the greatest interest attached to the right kidney, which appeared enlarged and felt unusually firm and exceedingly heavy On section of the kidney a calculus was found which completely filled the pelvic space and with its numerous projections extended up into each calix, crowding on the pyramids Both cortex and medulla were greatly reduced and in places had completely vanished. The calculus weighed 52 grams and measured 4x2x 1¼ inches A small calculus was found in the pelvis of the left kidney

Cleveland Medical Journal.
January

48 Tuberculosis of Peritoneum. L. S McMurtry Louisville Ky
49 Bladder and Bowel Fistulas Following Abdominal Section H Robb, Cleveland.
50 The Budding Paretic. J D O Brien Massillon Ohio

Chicago Medical Recorder
January 15

51 Chronic Urethral Discharges in the Male F A Lewsman Chicago
52 Drug Treatment of Pulmonary Tuberculosis G F Butler Chicago
53 Diagnosis of Salpingitis R. Ballinger Chicago
54 Surgical Treatment in Traumatic Ruptures of Kidney Ureters and Bladder W Fuller Chicago

Quarterly Journal of Inebriety, Boston.
December

55 Influence of Inebriety in Railroad Accidents H O Marcy Boston
56 Psychosis of Morphinism T D Crothers Hartford, Conn
57 Drink and Drug Habitués F T Searer, Tuscaloosa, Ala
58 Pathology of the Morphin Habit and Treatment. S G Burnett, Kansas City Mo
59 Effects of Alcohol in So-Called Medicinal Doses G E. Benton Chester, Va.
60 The Alcohol Cult. J Madden Portland, Ore.

American Journal of Urology, Boston.
January

61 Renal and Ureteral Hematuria. A. C. Chute Boston
62 Vesical Hematuria. L. Davis Boston.
63 Hemorrhage of Urethra and Prostate. E. J McKnight Hartford.
64 Pathogenesis and Treatment of Hematuria. C G Cumston Boston.
65 Bilharzia Hematobium F W Robbins Detroit.

New Orleans Medical and Surgical Journal.
February

66 Some Contraindications of General Anesthesia. J D Bloom. New Orleans
67 What Every Physician Should Know of Ophthalmology H D Fenn New Orleans
68 Necessity of a Knowledge of Therapeutics by the General Practitioner of To-day A. Gessner New Orleans
69 Cases Showing Necessity of Electricity as a Therapeutic Agent S C Barrow Shreveport.

Mississippi Medical Monthly, Vicksburg.
February

70 Deformities of the Nasal Septum H. Flowers Brookhaven
71 Morphinomania. R. M. Donald Inverness
72 Dressings S W Glass Durbin
73 Leg Amputation for Gangrene F L Bott, Lexington.

Louisville Monthly Journal of Medicine and Surgery
February

74 Results of Operations for Prostatic Hypertrophy L [illegible] Louisville
75 Medical Treatment of Salpingitis J H Ely Frankfort

76 *Wounds of the Liver J F Cannaday Hansford W Va.
77 Cholesteatoma of the Ear S G Dabney Louisville
78 Tabulation of Cases and Bibliography of Ruptured Kidney A. H Barkley, Lexington Ky

76—See abstract in THE JOURNAL, Nov 24 1906, page 1765

The Military Surgeon, Carlisle, Pa
February

79 *Tropical Hygiene in Reference to Clothing Houses Routine and Diet. A Stuart
80 A Mountain Litter H Marechal Paris
81 Influence of Burggrave in Modern Therapeutics with Special Reference to Military Practice W T Thackeray
82 A Geometrical Cyrtometer for the Easy Application of *Chleault's Method of Cranio Cerebral Localization* W H Bell
83 New Field Latrine which Fulfills Requirements for Troops in Active Service F C Herrick Cleveland
84 Military Medical Service of the Teutonic Order J Steiner Vienna.
85 Defective Vision as a Cause for Rejection for Military Service F J Ruffner
86 Febrile Icterus in Port Townsend Washington W C Stimson

79 **Tropical Hygiene with Reference to Clothing, Houses, Routine and Diet**—Stuart in speaking of the change that has been made in military technic by the colonization of the tropics, says that the white man in the tropics is an exotic and that recruits should never be sent on tropical service but well seasoned soldiers should be picked out Troops intended for such service should be recruited from the natives of our southern states, and if possible men of dark complexion should be selected Headgear for troops should be selected with great care The sun helmet should be light have a double body with an air space between and should be so constructed as to protect the temples the nape of the neck and the face A layer of tin foil between the cork and the cloth of the helmet seems to be valuable in keeping out many dangerous light waves For clothing cotton duck for the uniform is both cheaper and cooler than linen duck The outer garments should be white to reflect the actinic rays and the underclothing should be of dark colored material to prevent the penetration of rays that prove injurious In general the clothing should be made for comfort and not for "smartness" Stuart calls attention to the fact that most houses built by Americans in the tropics are utterly unfitted for the climatic conditions found there He says that American architects pay scant attention to local conditions and resent any suggestions from a medical officer as impertinence He says that the British excel all others in making things comfortable in warm climates their long experience in colonization standing them in good stead The bungalow built by the British in India is undoubtedly the best hot weather house with its large roof single story and broad piazza running all around It should be faced by the compass north or south according to the point from which the trade winds blow most of the year In speaking of garrison routine Stuart says that white people should turn out at sunrise and the morning shower bath be taken in warm water, as cold water is much too stimulating Fruit should always be eaten with the morning coffee the fresh native fruit being best Drills and fatigue work should be done in the early morning and the important work of the day should be finished before breakfast which should come at 11 20 a m Stuart recommends the "flexion step" recently spoken of by Munson as being particularly valuable in the tropics as it permits a maximum of ground to be covered with a minimum of effort expended

Journal of Outdoor Life, Trudeau, N Y
February

87 Tuberculosis Work in Europe and in the United States J Walsh Dillard [illegible]
88 Tuberculosis Campaign in Boston J P Hayes Boston
89 Duty of the Community to the Tuberculous Dennis [illegible]

Virginia Medical Semi-Monthly, Richmond
February 8

90 Progress of Surgery S Weir Mitchell Philadelphia
91 Wounds of the Liver J F Cannaday Hansford W Va.
92 Diagnosis of Cerebral Tumor and Localization of Lesions C P Lincoln Philadelphia
93 Hydrotherapy J C [illegible] Chicago

91—This [illegible] appeared in the [illegible] and can be found in [illegible] page 1765

International Clinics.
Vol IV Sixteenth Series

94 Electrotherapeutics J H W Rhein, Philadelphia
97 Prevention and Treatment of Chronic Nephritis. J M French San Diego Cal
98 Etiology and Treatment of Chronic Constipation J D Steele, Philadelphia
97 Treatment of Obesity P Grocco Florence Italy
98 Non-operative Treatment of Renal or Ureteral Calculi Causing Colic H Lilienthal, New York
99 Care of Tuberculous Subjects W Porter St. Louis
100 Pulmonary Tuberculosis in the Middle-aged and Aged J D Squire London.
101 Physiologic Influence of Lowered Barometric Pressure. H Sewall Denver, Colo
102 Obscure Renal Hematuria. A. R Elliott, Chicago
103 Myxedematous Infantilism and Incomplete Myxedema R. S Morris Baltimore.
104 Syphilitic Aortitis C Dieulafoy Paris
105 Recent Progress in Disorders of the Adrenals L. Barnard
106 Treatment of Fractures of the Lower Extremities. G G Ross Philadelphia.
107 Treatment of Hip-Joint Disease. R A. Hibbs, New York
108 Tuberculous Hip-Joint Disease Osteomyelitis and Transplantation of Fibula and Ankylosis of Jaw J F Rinehart, Oakland Cal
109 Vesical Tumors. D Wallace
110 Treatment of Hemorrhoids G P Müller
111 Placenta Prævia and Its Treatment J B DeLee
112 Lacerations of the Cervix of the Uterus and Their Repair W A N Dorland, Philadelphia
113 Chronic Cystitis in the Female D H Craig Boston
114 Laryngeal Complications of Tuberculosis E F Trevelyan
115 The Mastoid Operation C W Richardson Washington

Journal of the Medical Society of New Jersey, Orange
February

116 Hysteria and Neurasthenia in Women M J Synnott Montclair
117 Treatment of Chronic Nervous Conditions. W G Schauffler Lakewood
118 Chorea T B Prout, Summit

Journal of Cutaneous Diseases, New York
February

119 Syringocystoma C J White, Boston
120 Elephantiasis of Penis and Scrotum Due to Syphilis A Ravogli Cincinnati
121 Case of Pemphigus Vegetans. J M Winfield New York City

FOREIGN

Titles marked with an asterisk (*) are abstracted below Clinical lectures single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal
February 2.

1 *Diagnosis and Treatment of Laryngeal Cancer F Semon
2 *Duodenal Ulcer and Its Treatment. A W M. Robson.
3 *Repeated Abdominal Section for Perforation of Gastric Ulcer A Cuff
4 *Multiple Internal Diverticula of Small Intestine A. A. S Skirving
5 *Opsonins and Their Utility in Practical Medicine H French
6 *Temperature of Japanese Hot Baths L. Hill.

1 **Cancer of Larynx.**—In this article Semon expresses his well known views on cancer of the larynx He advocates early diagnosis, when thyrotomy will suffice to save the patient in cases of instrinsic cancer, although total laryngectomy will remain the operation of necessity in cases of extrinsic cancer of the larynx.

2 **Ulcer of Duodenum.**—Robson discusses the clinical history of duodenal ulcer in great detail and expresses an opinion that the operation of posterior gastroenterostomy is the treatment for this affection He has operated on 66 patients without a single fatality Among 155 cases of acute perforating duodenal ulcer recorded in the literature there was a mortality of 66 per cent Sixty-one patients were operated on within 24 hours of rupture, with a mortality of 37 7 per cent, whereas among 63 patients operated on later than 24 hours after rupture the mortality was 82 5 per cent Of 31 cases in which the time of operation was not stated, but in which the time was probably over 24 hours after rupture, 90 3 per cent proved fatal Robson says that it is astonishing to find how long in many of the cases of duodenal ulcer the symptoms persist the patients being treated for dyspepsia, gout, gastroduodenal catarrh, neurosis, chronic appendicitis, etc In some of his cases a 10, 15, 20 or even 30 years' history of dyspepsia had been given, with characteristic symptoms throughout and with irregular intervals of relief by treatment and relapses every few weeks or months He thinks that duodenal ulcer is much more common in early age than is generally recognized, although the condition as usually diagnosed is seen for the most part in the middle aged.

3 **Repeated Abdominal Section for Gastric Ulcer.**—The patient whose history is recorded by Cuff was operated on twice for the perforation of two totally distinct ulcers of the stomach Since he was 10 years of age, the patient (now aged 27) had suffered from symptoms referable to serious trouble in his stomach For 13 years there had been symptoms pointing to mischief in the neighborhood of the pylorus or, more probably of the duodenum The perforations occurred four years apart An anterior gastroenterostomy was done at the first perforation In the interval between the two operations the patient had repeated attacks of gastric pain and vomiting

4 **Multiple Internal Diverticula of Small Intestine.**—While operating in a case of right sided acquired strangulated inguinal hernia, Skirving noticed six equidistant depressions on the concavity of a loop of bowel On exploration with a probe it was found that these depressions represented the mouths of hollow, finger like processes which projected obliquely in the lumen of the gut for distances varying from one inch to two inches All ended blindly and were apparently localized invaginations of the whole thickness of the wall of the gut Repeated attempts to reduce these invaginations failed The patient has had slight aching pains in the right inguinal region before and after the operation Skirving wonders whether these pains are associated with the diverticula

5 **Opsonins in Practical Medicine.**—French presents a general review of this subject and reports three cases to indicate the benefits that he obtained from careful vaccine treatment, particularly in cases of local tuberculous mischief and in cases of staphylococcal troubles, such as acne, boils and abscesses

6 **Temperature of Japanese Hot Baths.**—According to Hill, the Japanese can stand a bath hotter than can the Europeans He says that the temperature of the Kusatsu mineral springs ranges from 100 to 160 F, while the baths are generally 113 to 128 F The patients remain in this bath from three to four minutes, and take five baths every day

The Lancet, London.
February 2.

7 *Pain in the Groin W Bennett.
8 *Idiopathic Cyanosis Due to Sulph hemoglobinemia. S West and T W Clarke
9 *Causation and Treatment of Some Headaches W Harris.
10 Opsonins and the Opsonic Index and Their Practical Value in Treatment of Disease G A. Crace-Calvert.
11 Present Means of Combating Sleeping Sickness A Kinghorn and J L Todd
12 Paratyphoid fever in the Tropics Mixed Infection A Castellani.
13 *Transposition of the Viscera F F Larkins
14 Visual Efficiency of the Uncorrected Myope J H Parsons
15 Rôle of the Blood Plasma in Disease H Campbell
16 German Methods of Meat Inspection as Carried Out in Berlin H A Macewen

7 **Pain in Groin.**—The cases reported by Bennett 54 in number, had the following points in common 1 Pain, continuous or intermittent, in the fold of the groin without swelling tenderness or any other sign of lesion near the seat of pain 2 An impression on the part of the patient that the cause of the pain was above or below the groin, as the case may have been, without being able to locate it In the majority of cases, movements of the hip joint had no effect on the pain, but in some the pain was either produced or increased by extreme flexion or by forced extension In these cases the pain was caused by many varying conditions, such as stone in the bladder and ureter, prolapse of the ovary, hernia, varicose veins, movable kidney, spinal abscess, disease of the rectum, tumor of the tibia flatfoot, etc Bennett presents the following conclusions 1 Pain in the groin as an isolated symptom may arise from causes either so remote or unlikely that their existence would at first sight seem hardly worth consideration 2 No examination in a case of pain in the groin can be effective unless it is made in the erect as well as in the horizontal position of the patient 3 Distinctly localized pain in the presence of obvious organic disease of which the patient is aware may so assert itself as to lead to the gross condition being considered of little or no importance 4 The belief in a "functional" or "psychic' pain would be greatly diminished

if in all cases of apparently unexplainable pain a more comprehensive search were made for a cause than is sometimes done

8 **Idiopathic Cyanosis.**—West and Clarke report the history of a woman, aged 37, who suffered from idiopathic cyanosis due to sulph hemoglobinemia The most striking feature in the case was the color of the skin, resembling in tint that of silver staining, which made the patient look when asleep as if she were moribund The cyanosis was universal Pressure with the finger showed the skin when emptied of blood to be of the normal yellow hue The patient was feeble, but otherwise presented no symptoms Although the authors present several theories, a conclusion is not arrived at as to the cause of this affection The point of chief clinical interest is the source of the sulphuretted hydrogen

9 **Headaches**—The headaches discussed by Harris are the paroxysmal and periodic variety, and those dependent on some form of toxemia

13 **Transposition of Viscera**—Larkins reports a case of this kind which was found at postmortem on an infant aged 12 months, dead of tuberculous meningitis The heart lay in the center, inclining to the right The right lung had two lobes, the left lung three The esophagus lay to the left of the aorta till near the diaphragm, when it crossed over to the right The stomach occupied the right hypochondrium and the duodenum proceeded to the left, being reflected round the head of the pancreas and turned back toward the right. The appendix was situated in the left iliac fossa and all the other organs in the abdominal cavity were reversed, including the vessels

British Journal of Children's Diseases, London.

January

17 *Alcoholic Cirrhosis of Liver in Children E Jones
18 Historical Notes on Rickets J Burnet.

17 **Alcoholic Cirrhosis of Liver in Children.**—Jones reports two cases of alcoholic cirrhosis of the liver in children, one of the patients being aged 16 months and the other 2 years and 11 months Although there was an alcohol history in both cases, the alcohol had not been administered in excess The first patient had received wine, about a tablespoonful, twice a day, for 11 months, for the purpose of strengthening the child's health The second patient, following an attack of whooping cough was given brandy, in doses of a dram, twice a day, for about five weeks Both patients did well under treatment Jones discusses the subject in general very fully The article is to be continued.

The Australasian Medical Gazette, Sydney

December 20

19 Some Less Familiar Forms of Hydatid Disease from a Geographic and Pathologic Standpoint A Watson
20 Progressive Muscular Atrophy with a Case of Facial Type of Erb's Juvenile Progressive Muscular Atrophy E S Littlejohn
21 *Guaiacol in the Treatment of Typhoid. H W Bryant.
22 An Adjustable Axis Traction Forceps F Barrington
23 *Diverticula Spuria Intestinalis F A. Johnson
24 *Treatment of Trachoma E T Smith.

21 **Guaiacol in Typhoid**—Bryant has treated at least 200 patients with guaiacol inunctions with only one death in the series He says that the temperature is controlled easily in most cases, the patient feels better and the skin is kept moist, and very rarely does any diarrhea occur during the course of the treatment.

23 **Spurious Intestinal Diverticula**—At least half a dozen cases of this kind have been seen by Johnson He says that if medical men who conduct postmortems will keep a sharp lookout for this condition many more such cases would be found

24 **Treatment of Trachoma**—Smith has had most excellent results in the treatment of trachoma from the use of boric acid and protargol, the former for its mechanical effects, the latter for its chemical After instilling cocain, a probe or match is mounted with absorbent wool twisted into a firm olivary knob This is soaked in a 25 per cent. solution of protargol and then dipped in boric acid which coats it over The eyelids are everted and the swab is rubbed over the whole surface of the palpebral conjunctiva until bleeding is produced. This causes a uniform scarification of sufficient intensity and little likely to cause scarring The treatment is repeated daily As the condition improves and the lids get smoother, the use of the boric acid is abandoned Smith condemns the use of copper sulphate and silver nitrate

Medical Press and Circular, London.

January 16

25 Optic Neuritis and Its Relationship to Intracranial Tumors R. A. Fleming
26 Some Aspects of Pruritus F H Barendt
27 Medical Inspection of School Children A. S Arkle
28 Letter to a Young Practitioner G Cornu

January 23

29 *Mental Risks of Adolescence T S Clouston
30 History of Ovariotomy F B Jessett
31 Tetania Parathyropriva. J Erdheim
32 The Hemorenal Salt Index as a Test of the Functional Efficiency of the Kidney D Turner

January 30

33 Chronic Non Suppurative Diseases of the Middle Ear M Yearsley
34 Ventrofixation of the Uterus in Treatment of Backward Displacements H Briggs
35 Infective Bronchitis and Its Relation to Tuberculosis H P White
36 Suffocative Hydrothorax in Which the Pleurae Were Tapped Several Hundred Times J F O Carroll

29 **Mental Risks of Adolescence**—Clouston claims that the mental risk of adolescence is so great that 75 per cent of the chronic insanity now existing in England results from it Almost all the typical secondary dementias, and most of the delusional insanities arise out of, or have as a preliminary stage, attacks of adolescent insanity

The Clinical Journal, London

January 16

37 Paralysis of the Legs in Women J A Ormerod
38 *Apoplexy and Its Treatment L. Guthrie.
39 Diagnosis of the Common Swellings of the Long Bones W Trotter

January 23

40 *Two Cases of Scarlet Fever A K. Gordon.
41 Points in the Diagnosis of Urinary Disease R H J Swan

January 30

42 *Some of the Commoner Skin Diseases of Infancy and Childhood R Hutchinson
43 Surgical Danger Signals in Acute Abdominal Disease D Power
44 *Eye Diseases Associated with Sepsis of Neighboring Mucosæ N B Harman
45 San Remo and Some of Its Advantages as a Winter Resort W S Eccles

38 **Treatment of Apoplexy**—Guthrie says that while treatment may be useless in grave cases that is no reason why it should be withheld when the symptoms and physical signs suggest rational measures for their relief In mild cases spontaneous recovery usually takes place and active treatment is therefore, unnecessary and may be dangerous

40 **Scarlet Fever**—Gordon believes that in the polyvalent anti streptococcus serum we have a remedy of great value in toxic cases of scarlet fever It is essential however, that an adequate dose should be given, not under 50 c c, and that the serum shall have been freshly prepared—under a year old, in fact. The ordinary anti streptococcus serum is useless

42 **Common Skin Diseases of Infancy**—Hutchison discusses specific drug and parasitic rashes, intertrigo, eczema, impetigo, urticaria, sweat rashes, and erythemata For the relief of itching he has found the following ointment efficacious It must be rubbed in all over the body at night

℞	Beta naphthol	gr xvi	1
	Zinci oxidi	ʒi	4
	Unguenti	℥i	30

44 **Eye Diseases Associated with Sepsis Elsewhere**—According to Harmon, there are three modes of communication of disorders of the eye—direct, indirect and reflex As examples of each are given destructive corneal ulcers, following on disease of the lachrymal duct and lachrymal sac, insidious and chronic forms of iridocyclitis arising coincidently with sepsis of the buccal cavity, and phlyctenular conjunctivitis or blepharitis

Bulletin de l'Académie de Médecine, Paris

46 (LXXI No 3 pp 105-136) *Prophylactic Treatment of Arteriosclerosis. (Traitement de la presclérose) H Huchard
47 Serotherapy of Tuberculosis (Sérum antitub de Marmorek.) C Monod
48 (No 4 Pp 137 150) Fowl Serum for Serotherapy of Tuberculosis. (Sérum des poules.) Viguier

49 *Classification and Nomenclature in Medicine. (Classification etc.) E. Lancereaux.
50 *Tuberculosis and Alcoholism in Canada. (Mission au Canada.) Triboulet.

46 "Presclerosis."—Huchard has been asserting that certain functional disturbances of the blood vessels, the result of some intoxication if not combated in time, lead to the anatomic changes and symptoms of arteriosclerosis. He calls this state of arterial hypertension the stage of presclerosis, and insists that appropriate treatment may cure it and prevent the impending arteriosclerosis. He is unable to present pathologic anatomic data to sustain this view, but from the standpoint of therapeutics and the success of appropriate treatment he claims that these assertions have been amply confirmed. The physician's task is to recognize the "condition" early, to determine the degree and the greater or less permanency of the arterial hypertension, and of the accompanying, more or less pronounced, insufficiency on the part of the kidneys. He should strive to remove the cause which is generally poison, from the digestive tract acting on the coats of the vessels and irritating the kidneys. He should restrict the patient to a milk and vegetable diet, limiting the intake of salt, supplementing the dietetic measures by drugs to dilate the vessels and to lower the arterial tension, reducing to the minimum the alimentary toxins in the organism and promoting their elimination early and always by suitable treatment of the kidneys and diuresis, and, finally by sustaining the heart in its incessant struggle against the peripheral obstacles. Treatment along these lines, he declares, will ward off the anatomic lesions otherwise inevitable from the almost uninterrupted overwork on the part of the vessels and the numerous complications which are the result of intoxication of the organism. Huchard's views and technic were summarized on page 397 of vol. xli of THE JOURNAL, and page 2023 of vol. xlvi, 1906. He dwells here more particularly on the necessity for assisting the kidneys and the heart. For 12 years he has had the findings constantly recorded for every patient, a total of 13,000, including 10 000 with heart disturbances. It has been his frequent experience that patients with the signs of arterial hypertension when first seen, developed later, in the course of from two to four years or longer, all the cardiovascular and toxic phenomena of cardiorenal arteriosclerosis. In other similar cases, by curing the arterial hypertension and the concomitant renal insufficiency, the stage of arteriosclerosis was never reached. Robin's experience corroborates these statements, and he adds that they apply also to stomach pathology. Patients sometimes develop arterial hypertension in the course of an acute attack of dyspepsia, but it subsides with the attack at first. Later it is liable to persist. Huchard claims that if the lesions of arteriosclerosis are established during the stage of presclerosis—as some maintain—then we must recognize two phases of arteriosclerosis, the curable and the incurable. By combating the disease in the curable stage, it may be possible to ward off the incurable lesions.

49 **Classification of Diseases.**—Lancereaux and Paulesco comment on the haphazard way in which diseases have been named, and the necessity for a more scientific classification according to the data learned in recent years in regard to their origin. They urge the division of all maladies into five groups, those caused by physical agents, those caused by chemical agents and those caused by parasites, with the additional group of nervous disturbances resulting from any of the above, and the neoplasms as a fifth group. The natural sciences and chemistry have not hesitated to modify their nomenclature to conform to the progress of science, and medicine should do the same. They suggest the term "physinosis" for diseases due to physical agents, "cheminosis" for those due to chemical agents, "bionosis" for the parasitic affections, with "neuronosis" for the nervous affections and the termination "oma" for the neoplasms. In the subdivisions the termination "ism" should be retained, as at present, for the "cheminoses," while the "bionoses" should retain their present ending "osis," as in mycosis. The termination "pathy" after the name of an organ should be used as it is at present, in nephropathy, pneumopathy, etc. Instead of the vague terms gastritis, dermitis or the like, he would use the name of the organ, followed by "pathy," and preceded by the term expressing the physical, chemical or parasitic cause. This would establish the nomenclature on a solid basis, he claims, as the same causes always induce the same effects. A committee was appointed to discuss the subject and to report later.

50 **Tuberculosis and Alcoholism in Canada.**—Triboulet remarks that it seems strange that in the vast area of Canada and with the comfortable homes of the inhabitants that "overcrowding" is a prolific source of tuberculosis as much as in the crowded cities. Most of the rooms in the houses are kept shut up in the summer to keep out the sun and dust and in winter to keep out the cold, and the family congregates in a single living room. If one member of the family contracts tuberculosis the contamination of the whole family is almost inevitable. There is no isolation of the tuberculous in the hospitals. The death list from tuberculosis in Montreal was 700 during 1903, with a population of 300,000, and 2,200 tuberculous individuals were recorded. Alcoholism, on the other hand, is rare.

Archiv f. Gynäkologie, Berlin.

Last indexed page 554

51 (LXXX, No. 3, pp. 439-680.) Etiology of Wall or Ridge Surrounding Placenta. (Placenta circumvallata.) W. Liepmann.
52 *Experiences with Artificial Premature Delivery in Case of Mechanical Disproportion. (Künstliche Frühgeburt.) E. Möller.
53 Four Cases of Hypersecretion of Sweat and Sebaceous Glands in Axilla in the Puerperium accompanied by Swelling and Simulating True Secretion of Milk. (Hypersecretion der Schweiss und Talgdrüsen in der Achselhöhle.) L. Seitz.
54 *The Neutrophile Blood Picture in the Puerperium and Its Modification Under Streptococcus Serum. (Neutrophile Blutbilde im Wochenbett, etc.) O. Burkard.
55 *Study of Duration of Gestation. (Wann tritt die Geburt ein?) F. Schatz.

52 **Artificial Premature Delivery with Mechanical Disproportion.**—Möller reports the experiences at L. Meyer's maternity at Copenhagen, between 1892 and 1904, with 80 experiences with artificial premature delivery of 58 women. During this period, 21,066 childbirths are recorded, with contracted pelvis in 646 cases, about 3 per cent. of the total number. The mortality of the children, with induced premature delivery, was 20 per cent. higher than in the normal cases, but if the deliveries before the thirty-fifth week are excluded, the mortality was only 10 per cent. higher. The mortality after the first few days was approximately the same as for normally delivered children. Fully twice as many children were born alive with artificial premature delivery as in case of children carried to term by the same mothers.

54 **The Blood in the Puerperium Under Antistreptococcus Serum.**—The effect of the antistreptococcus serum was marked in all the cases in less than twenty-four hours, showing great destruction of the neutrophiles. The course of the cases confirmed the assumption that this destruction of neutrophiles is a salutary reaction to the serum. It was accompanied by a considerable increase in the total number of leucocytes, over compensating the loss. This occurred, however, only in cases in which the organism was capable of a response to the serum. If no response is possible, the destruction of the neutrophiles, not being accompanied by an over compensation, is liable to be directly injurious. The communication proceeds from Knauer's gynecologic clinic at Gratz, and is based on an experience of 16 cases of severe puerperal infection in which antistreptococcus serum was used. In 12 there was pure streptococcus infection, and in half of these the response to the serum was pronounced, all the patients rapidly recovered. In the other cases no influence from the serum was apparent and months elapsed before the patients had fully recovered.

55 **Predetermination of the Day of Birth.**—Schatz continues his article on this subject, the first part of which was published in volume lxxii. He here discusses the physiologic week, the physiologic double month, the various periods and periodicities and the various kinds of both in the human body and their combinations, striving to deduce conclusions for the predetermination of the date of delivery. The article is based on the study of 241 cases. He calls attention to the fact that the periodicity in the electric tension of the air, which

Arrhenius has demonstrated to be 27 3 days, is paralleled by the periodicity of menstruation which will very frequently be found also to be 27.3 days when the average of a long series is taken

Beiträge zur klinischen Chirurgie, von Bruns,' Tübingen.
Last indexed page 372.

56 (L No 3 pp 667 819) Retroperitoneal Ganglion Cell Neuroma. (Neuroma gangliocelluläre amyelinicum) E Ohse.
57 *Surgery of Spleen (Milz Chirurgie.) M Flammer
58 Operative Treatment in 52 Cases of Gastric Ulcer (Ulcus ventriculi) M. Hoffmann
59 Blood Pressure During Artificially Induced Hyperemia. (Blutdruck bei der Bier'schen Stauung) A. Hofmann
60 *Operations on the Hypophysis (Operationen an der Hypophyse.) H Schloffer

57 Splenectomy.—Flammer reports 5 cases in which the spleen was removed, for rupture in 3 and for a chronic, infectious tumor in the spleen, or for Banti's disease in the others

60 Operations on the Hypophysis.—Schloffer has found that, on the cadaver, the best means of access to the hypophysis is by turning back the soft parts of the nose, with temporary resection of the upper jaw This technic is preferable in the clinic, also, he states, in case the patient is strong enough to stand it. If one eye is partially or entirely blind, it might be better to turn back the nose from one side with resection of the wall of the orbit He believes that the hypophysis can be successfully operated on without injury of neighboring organs, with the aid of the α rays, especially if the operation is done in two sittings He does not believe that malignant disease of the hypophysis indicates operative treatment, as the merely palliative results are not enough of an advantage to outweigh the gravity and difficulty of the operation In acromegaly he advises operation only when the symptoms are exceptionally severe and distressing He discusses the physiologic importance of the hypophysis and the various pathologic processes likely to occur in it

Deutsches Archiv f klinische Medizin, Leipsic.
Last indexed page 555

61 (LXXXVIII Nos. 4-6, pp 325-618) *Length of Survival of the Tuberculous in Norway (Lebensdauer der Schwindsüchtigen) F Holst, L. Nicolaysen and A Ustvedt
62 *Disturbance of the Chemical Correlations in the Organism (Störung der chem Korrelationen.) L. Krehl
63 *Normal and Pathologic Emphysema Mechanism and Treatment (Mitteilnge und Vitalkapazität der Lungen) C. Bohr
64 *Blood Formation in Severe Anemia and Leukemia (Blutbildung etc.) E Meyer and A. Heineke.
65 Atypical Severe Anemias (Atyp schwere Anämien) P Morawitz
66 *The Colon typhoid Group in Relation to Affections of the Biliary Passages. (Colityphusgruppe.) F Blumenthal
67 *Influence of Hydrochloric Acid on Pepsin Digestion. (Einfluss der Salzsäure auf die Pepsinverdauung) A Müller
68 *Elimination of Euglobulin in the Urine in Case of Amyloidosis (Ausscheidung von Euglobin im Harne bei Amyloiderkrankung) E Zak and F Necker
69 *Polyuria with Contracted Kidney (Vorkommen der Polyurie bei Schrumpfniere) M Nagel
70 *Heart Block (Leitungsstörung im Herzmuskel) G Joachim
71 Fibrinous Bronchitis in a Consumptive (Bronch fibr bei einem Tuberkulösen) E Gottstein
72 *Reciprocal Relations Between the Various Syndromes of Typhoid Fever (Wechselverhältnis zwischen den verschiedenen Symptomkomplexen des Abdominaltyphus) W Ebstein
73 Percussion (Das Plessimeter) R Geigel
74 Spiral Form of Nuclei in the Contracted Heart Muscle (Spiralwindung der Herzmuskelkerne) W Heubner
75 Case of Occasional Heptosuria. (Zeitweise Heptosurie) J Rosenberger
76 Agglutination of Typhoid Bacilli in Proteus Infection (Aggl von Typh Bac bei Proteusinfektion) Steinberg

61 Length of Survival After Tuberculous Infection.—The large proportion of survivors retaining their earning capacity after nine years is a striking feature of this statistical summary of conditions in Norway Four of the principal life insurance societies of the country paid physicians for their trouble in filling out and returning the question blanks sent to them by a committee appointed by the Christiania Medical Association The probabilities of survival, according to these statistics based on the living and the dead, are that about 50 per cent will die within 36 or at most 42 months Correcting these statistics by basing them on the dead alone the average length of survival was between 36 and 59 months after the first appreciable clinical symptoms. The figures tabulated show that of 2 002 tuberculous men and women, 908 were living after the fourth year and 52.3 per cent retained their earning capacity After the ninth year 322 were still alive, with 67 4 per cent. retaining their earning capacity The statistics are classified according to various methods and the findings compared

62 Disturbance of the Chemical Correlations.—Krehl remarks that the method of direct treatment is undoubtedly the method of the future, but internal medicine still uses the indirect methods, and he shows by a number of concrete examples the mechanism of this indirect influencing of morbid conditions Theoretical research is now gradually supplying the solid foundation for the therapeutic procedures built on empirical observation of the chemical action of one organ on other organs The "chemical messengers" were discussed editorially in THE JOURNAL, Feb 9, 1907, page 524 Krehl reviews their action in the disturbances of the menopause, in eclampsia, in tetany, nephritis, etc, remarking that the physiology and pathology of the future will probably place the chemical activity of the leucocytes in the foreground. Their universal appearance wherever active chemical processes are going on in the body and their relations to all the tissues indicate the general importance of the substances contained in them and their joint action with numerous other substances The practical result of these theoretical studies is the increasing realization of the importance of treatment of the general condition of the patient in all cases He adds that when we seek for the true essential element of the success of the great physicians, we always find—aside from the impress of their personality—an insight into and skilful treatment of the general condition as the predominant factor in the treatment of affections of single organs Every individual has his own chemical make up, his own special intermediate metabolism which may resemble as a whole those of others, but in certain points may differ widely from others Study of the chemical correlations shows the tendency displayed by the cells to adapt themselves to the disturbing elements brought to them by disease causing elements, this tendency always striving toward a spontaneous cure Everything that stimulates the cells to overcome the disturbing influence favors the spontaneous cure Study of the chemical correlations also shows how *increased functioning* or possibly merely a modification in the functioning of other tissues, which apparently have nothing to do with the organ directly affected by the disease, may yet have an indirect favorable action on the elimination of the disease cause

63 Functional Changes in the Capacity of the Lungs.—Bohr discusses what he calls normal and pathologic emphysema, the vital capacity, and the vital medium capacity, that is, the amount of air taken into the lungs in ordinary breathing the residual air the influence of the attitude and of muscular exertion on the medium and extreme capacity in ordinary air and with oxygen and carbon dioxid, etc When the action of the lungs is increased in response to increased circulation of blood through them, temporary emphysema is normally induced Emphysema in pathologic conditions should be regarded in the same light, he says, that is, as an ingenious reflex action designed to counteract the functional disturbances induced by the *underlying affection* It is *irrational* to suppress it

64 Blood Formation in Anemia and Leukemia.—Meyer and Heineke relate experiences which demonstrate, they think that the changes in the blood in anemia and leukemia are not caused by a perverted formation of blood, but are merely the response of the blood forming organs to some injurious *influence affecting the blood primarily* This response is entirely different in myeloid and in lymphatic leukemia In the *myeloid form the myeloid transformation going on in the* liver and spleen restores to these organs the aspect and functions of embryonal existence All the changes observed in the course of pernicious anemia in the various blood forming organs, he states, are compensating processes against primary injury of the blood, and not megaloblastic degeneration of the bone marrow The process of [illegible] transfor[illegible] f the liver and spleen can be induced by the blood The process of [illegible] the [illegible]ng organs in these cases para[illegible]tic [illegible]of picture and general condition

66 **The Colon-Typhoid Group in Relation to Affections of the Biliary Passages**—Blumenthal reports a number of cases showing the predominance of the colon bacillus and the typhoid bacillus in the etiology of biliary affections The colon bacilli found differed in some respects from the ordinary *Bacillus coli communis* If the latter is found it generally proves to be a secondary invasion, probably by way of the blood In one of the cases reported the first symptoms of cholecystitis were observed seven years after typhoid fever, but typhoid bacilli could be cultivated from the bile In another case typhoid bacilli were found in the normal biliary apparatus six months after the patient had recovered from typhoid fever In another case severe cholecystitis developed and typhoid bacilli were cultivated from the bile after cholecystostomy, but there were no symptoms to suggest typhoid fever at the time or previously The agglutination test was at first negative, but later gave positive findings In 3 other cases primary typhoid or paratyphoid infection of the gall bladder caused a more chronic cholecystitis Blumenthal reviews a number of similar cases of extra intestinal localization of typhoid infection, simulating and listed as pneumonia, nephritis, cholecystitis, etc., entirely free from symptoms on the part of the intestines The bacilli probably reach the biliary apparatus by way of the blood, and may lurk there undetected for years, passing at times into the intestine and voided in the stools, thus proving a source of infection for others, the more dangerous as nothing in the past of such persons suggests the possibility of their being bacilli carriers It is notable, he adds, that in nearly every instance bacilli carriers suffer from gallstones The agglutination test is valuable in such cases, being positive in his experience in every case, both chronic and acute, when typhoid infection was present or had been present at any time No connection between agglutination and icterus was evident Operative intervention is the only means known to date for the certain removal of typhoid bacilli from the gall bladder Paratyphoid bacilli vanished from the stool in one case after a gallstone operation, and examination a year later confirmed their absence The typhoid bacilli also vanished from the stools in from 11 to 15 days after the gallstone operation in the cases reported

67 **Influence of Hydrochloric Acid on Pepsin Indigestion**—Müller's conclusions from his research are to the effect that the best conditions for digestion of albumin occur when the albumin is dissolved in a low concentration and the total bound acidity is low Increasing amounts of free hydrochloric acid then promote the pepsin digestion to a certain favorable point, which remains constant In case of high total acidity, the same amounts of free hydrochloric acid have no influence on the pepsin digestion, he states, or may possibly hinder it From this point of view gastric digestion may be divided into two types The first characterized by more solid consistency of the stomach content, high total acidity, lack of free acid (dogs, cats), the second by more fluid stomach contents, low total acidity, and an excess of free hydrochloric acid (man, pigs) The facts cited explain, he believes, the numerous contradictory findings in the literature and the behavior of the free hydrochloric acid in the various animal species

68 **Elimination of Euglobulin in Amyloid Affections**—Zak and Necker describe 11 cases of amyloid degeneration of kidney, liver or spleen in which the discovery of euglobulin in the urine revealed the existence of the amyloidosis They describe the technic for the determination of euglobulin and assert that positive findings will be found a valuable aid in the differentiation of amyloid affections

69 **Polyuria with Contracted Kidney**—Nagel found polyuria in 47 per cent of 63 cases in which the diagnosis of contracted kidney was confirmed by the postmortem findings Excluding 7 patients in whom the polyuria was evidently the result of the subsidence of edema, this leaves only 33 3 per cent Nocturnal polyuria was observed in 25 5 per cent

70 **Disturbance in the Power of the Heart Muscle to Conduct the Impulse.**—Joachim relates the further history of the 4 patients whose cases were described in volume lxxxv of the *Archiv* and reports 2 new cases of unmistakable disturbance in the power of the heart muscle to pass the impulse onward from the auricle One is particularly interesting, as the gradual return to normal could be traced This patient was a robust young workman, with acute endocarditis accompanying recurring polyarthritis The typical symptoms of disturbance in the conductibility occurred abruptly and subsided again, they had entirely vanished by the end of the second day No cause for it could be ascertained If the radial pulse and the cardiogram alone had been the criteria, the disturbance of the conductibility would not have been discovered The venous pulse gave the clue

72 **Reciprocal Relations Between Various Syndromes of Typhoid Fever**—Ebstein describes a case of typhoid fever with extremely violent nervous disturbances and only insignificant typhoid lesions in the intestines, and reviews others like it from the literature They suggest the possibility, he remarks, that mixed infection occurs with typhoid more frequently than has been generally supposed. The secondary germs may penetrate from without, but the probability is stronger in favor of the coincidence of typhoid fever and sepsis from autointoxication If serum treatment of typhoid fever is to be successful, this possible factor in the symptom complex must not be neglected

Deutsche medizinische Wochenschrift, Berlin and Leipsic

77 (XXXIII No 3 Pp 80 128) Behavior of Certain Reflexes During Sleep (Verhalten einiger Reflexe im Schlaf) R Kutner
78 Fat from the Bodies of Streptothrix an Effectual Immunizing Substance for Leprosy (Ein bakterielles Fett als immunisirende Substanz bei der Lepra) Deycke Pascha and Reschad Bey
79 *Treatment of Fracture of Humerus During Birth (Behandlung der intra partum entstandenen Humerusfraktur.) C Stuhl
80 Treatment of Large Umbilical Hernia (Grosse Nabelschnurbrüche) L Fiedler
81 Thermophore Cap and Brow Bandage (Elastische Thermophorkopfkappe und Thermostirnbinde) L Gross
82 Public Provisions for Pregnant Women with Venereal Disease and for Children with Inherited Syphilis (Geschlechtskranke Schwangere und hereditär syphilitisch Kinder) A Buschke. Commenced in No 2
83 Medical Notes from the Gold Coast. (Aerztliche Erfahrungen etc., auf der Goldküste.) H Vortisch

79 **Fracture of the Humerus During Birth.**—Stuhl gives illustrations of a simple method of pulley extension with a half pound weight which he used for the fractured humerus of a new born infant He allowed the skin to dry out for two days after birth, and then adjusted the adhesive plaster dressing, splint and extension, with the infant lying in a wagon, the pulley was fastened to the handle of the wagon for The child, who had screamed constantly with many children at once after extension was applied, and every day as in case of and otherwise, were most excellent mothers

Münchener medizinische Under Antistreptococcus

84 (LIV No 3 pp 105 Streptococcus serum was marked Origin of Pulmonal twenty four hours, showing great gentuberkulose
85 *Transmission Neutrophiles The course of the cases con der Symptom that this destruction of neutrophiles
86 *Rudimentation to the serum It was accompanied by
87 *Sanatoriumbase in the total number of leucocytes, over (Anstalts)gs This occurred, however, only in cases
88 *Permanent mit Tub B was capable of a response to the serum
89 *Treatment of ble, the destruction of the neutrophiles,
90 Care of Idiots
91 Treatment of Hammer toe. (Hammerzehen is liable to ba
92 To Find the Round Ligament in the Inguinal Canal (Ligamentum rotunda im Leistenkanale) Reismann
93 Breast Pump to Obtain Aseptic Milk (Neue Milchpumpe) W Kaupe
94 Polyneuritis of Fowls and Beriberi Not Due to Oxalic Acid Poisoning (Polyneuritis der Hühner und Beri Beri eine chron Oxalsäurevergiftung?) F Eijkmann

85 See editorial in THE JOURNAL, page 613

86 **Practical Importance of Rudimentary Eventration**—The conditions caused by displacement of internal organs are likely to be mistaken for affections with which they have nothing to do, and treatment based on this erroneous conception is apt to aggravate the symptoms Distension of the stomach or intestine may push the diaphragm up on one side and, if the diaphragm is weakened from any cause, it is liable to stretch permanently The patients complain of feeling puffed up especially after meals, and the region below and near the left hypochondrium protrudes Heart disturbances are observed at the same time, oppression in the chest and

gions the spine is concave posteriorly (lordotic) Now, in the lordotic region, the muscles which pass over more than two vertebræ are chords of arcs of various lengths In kyphotic regions the muscles which pass over more than two vertebræ practically use the intermediate bones as pulleys around which their force is passed from the origin to the insertion of the muscle Removing the laminæ of the cervical vertebræ, in a lordotic region, does not interfere with the effect of the muscles which span the gap, for they are still chords of the arc, and they will still extend the spine in this region Removing the laminæ in the dorsal kyphotic region takes away the pulleys from the muscles and permits them to fall to deeper levels and makes them approach, perhaps, in function, the flexors of the spine by robbing them of their power to extend it At any rate, it permits the balance of power to pass to the flexor side of the spine From this reasoning it seems to me that the osteoplastic method would be preferable in the dorsal spine because of the retention of the laminæ and spinous processes and the preservation of their pulley effect on the muscles of extension But in the cervical spine (this may be true also of the lumbar spine) the preservation of the laminæ is not necessary for the preservation of the extensor function of the extensor muscles

Furthermore, in the osteoplastic method, the muscles are seriously implicated, for they are included in the flap, and consequently they must be cut across at the lower limit of the flap, and that they may unite again accurately and resume function is a question, for not only is accurate anatomic suture impossible, but the innervation of the muscle may be, and very likely is, interfered with by the lateral incisions, especially the semi-spinalis colli and the cervical multifidus, which lie wholly in the area of the flap, so that the osteoplastic method in the cervical region must be considered to be a surgical exploit, done for the sake of saving small fragments of bone whose value is questionable, and also at the risk of interfering with the musculature of the part by cross sections of large groups of important muscles, and perhaps by the sections of the motor nerves of these muscles

To get some personal information as to the preferences of others on this point I asked the opinions of Bevan, Binnie, Willard, Cushing, Bloodgood, Munro, Moore, McArthur, Bradford, McCosh, Richardson, Gibney, and Abbe The poll of votes was unanimously in favor of laminectomy plain, with no osteoplastic frills The only differences of opinion were in matters which were legitimately matters of taste, to wit the choice of instruments for cutting the laminæ, after they had been cleared of the soft tissues, including, always and especially, the periosteum Binnie prefers an osteotome Moore a chisel, every other selected rongeurs or a Deviltis forceps Moore added that he no longer sutured the meninges, the omission saved time and the result was equally good he has found, however, that sometimes a transverse cut in the soft tissues gave him more room when he wished to expose some of the deeper parts McCosh's relation of the fact that he several times had started his operation with the intention of doing an osteoplastic resection and had reverted to the simpler technic was very frank and very consolatory Abbe's operation differs from the others in that he saves the spinous processes and the important supraspinous and interspinous ligaments, he certainly thereby lessens the amount of hemorrhage, which is an important item, for he minimizes the cutting and one would think that in a spine so operated on the conservation of the ligaments would lessen muscular work in the maintenance of the erect position Cushing made the very important contribution of the fact that in repeating the operation on the same patient a year after the first event, he had found new arches produced from the conserved periosteum If this can be expected in all cases it obviates entirely the need for the osteoplastic method in almost all instances This bone regeneration with Abbe's saving of the spinous processes should give a spine functionally identical with the original state

THE OSTEOPLASTIC METHOD PRO AND CON

And yet, in spite of this, I think that sometimes cases may arise in which the osteoplastic method may have a place, because of the immediate restoration of the arch of the laminæ without waiting for the regeneration of bone This is in cases of vertebral tuberculosis in which the angular deformity of the kyphos is practically a right angle In these spinal columns, as can be seen if a longitudinal section of the bones be made, the bony canal is itself contracted antero-posteriorly and the cord has very little room and surely none to spare If such a spine be subjected to a plain laminectomy, with sacrifice of the spinous processes and laminæ, the uncut longitudinal spinal muscles fall back not to their original level but to a deeper level, and lie in the sulcus between the articular processes, resting on the peridural fat. Beneath this is only the dura mater and the cord, and the latter must take the major part of the pressure which these muscles originally made on the laminæ in pulling around the kyphos as around a pulley

Because of this concept of the mechanics of the condition, I essayed the osteoplastic method a second time, shortly after the operation on the patient already reverted to, in the case of a young girl, paralyzed for more than a year from the pressure of a right-angled kyphos due to vertebral tuberculosis in the upper dorsal region To my disappointment I could not make any ordinary forceps nor the Doyen saw cut the laminæ satisfactorily at their outer limits, and I was obliged to use the Keen forceps beginning to bite away the bone at the center of the arches This changed the osteoplastic into a plain laminectomy, and as I went on I found that absorption of the bodies of the vertebræ had been accompanied by ankylosis of the spinal articulations and fusion of the laminæ, this condition accounting for my inability to get the blade of any ordinary forceps between them Nothing much better could be asked for so far as the result in the bones was concerned, but the cord demanded relief from pressure and the laminæ had to be cut away The muscles were replaced and sutured, healing occurred without trouble, and the girl recovered in a surprisingly short time from her paralysis in fact, the day following the operation she could move her feet and legs not a little But each time that I have left her in bed without spinal traction, so that she could use the spinal muscles some and move her head about, or have tried to get her up, even though I had her in most carefully planned and well applied plaster-of-Paris apparatus holding head, neck and trunk, her paralysis has deepened, while each time that I have put her back in bed and reinstituted spinal rest and spinal traction the paralysis has disappeared Of course, it is a debatable point as to the exact tissue causing the pressure on the cord, but I can not myself put aside the idea that the muscles, even though in this case they had been cut in making the flap according

to the osteoplastic plan, made some pressure on the cord No outside substance has made the pressure for that has been guarded against, if cicatricial contraction made it, relief would not follow simply on restoration of the spinal traction, nothing else in the spinal column or its environment could make the pressure Spinal traction puts these muscles wholly at rest and the paralysis then disappears I can not myself explain the phenomenon on any other hypothesis

Now if I am right the osteoplastic plan would have replaced the laminæ where their pulley function could have been continued and the muscles have been held at a proper level Pressure again on the cord might have been avoided and the permanence of the relief have been assured It is in such a case as this that I believe the osteoplastic plan may have a legitimate use and in another such case I would again attempt the same operation

There is one thing more to say about the condition of the patient on whom I completed part of my operation according to the osteoplastic plan The support of the head is not adequate and it is said to be carried as if it were balanced on a pole, while movements of it are slow and difficult All of the gentlemen who wrote me of this point said plainly that the loss of the laminæ did not seem to weaken the spine, consequently I am safe in assuming that the extensive section of the muscles in this case is to be credited with causing the disability noted

As against the operation we may range the facts that it is done for the sake of saving fragments of bone which are not indispensable, and which are most likely to be replaced at a later date, that it necessitates a section of the muscles which leaves the spine with adequate muscular control, that it substitutes a difficult and long procedure for one that is comparatively easy and short

In favor of the method I can only say that it seems to me to be applicable to those cases of right-angled kyphos in which it is necessary to have at once the restoration of the laminæ to protect the cord from the pressure of the overlying muscles

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MEDICAL TENDENCIES AND MEDICAL IDEALS *

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The custom of opening the college session with a general address is an appropriate one, for it affords an opportunity to discuss some topics of interest alike to the medical student and teacher which are not provided for in the curriculum It is well at times to take a somewhat general survey of our profession, to study its tendencies and get possibly a clearer vision of what should be its ideals

MEDICINE AND MODERN SCIENCE

In common with every branch of knowledge, medicine has felt the influence of the great advance in modern science The progress made in the collateral subjects biology, chemistry, physics bacteriology, to which medicine is so closely related has made necessary a general readjustment of opinion. Slowly but surely the superstition, prejudice and ignorance or half knowledge of the past are vanishing before the light of modern discovery, and almost before our eyes a new science of medicine is being evolved

The general attitude of our profession to-day may be characterized as one of scientific skepticism It receives nothing on authority, no matter how ancient or honored It places above everything else the ability to see things as they are, and to draw accurate conclusions from these observed facts It desires to submit to a fresh examination, by the methods of modern science, every theory or practice and endeavors to make the new view correspond with the latest knowledge. It seeks to establish on a scientific basis every fact in etiology, every principle in diagnosis, every method of treatment

Huxley says that one who exposes an old error should be as highly regarded as one who discovers a new truth. Therefore, we should honor the one as much as the other, for both are needed in the development of our science In the overthrow of much of the ancient science of medicine, we must not at the same time lose the many valuable contributions of the past to the medical art, none the less real because sometimes based on wrong theory

But this same new scientific spirit to which we owe so much has brought with it an incidental peril While becoming more scientific, there is a great danger that medicine shall become less human Is it not true that in magnifying the value of medicine as a science there has come about incidentally, and perhaps somewhat unconsciously, a disposition to depreciate the dignity and importance of medicine as an art?

The men of the laboratory to-day dominate medical thought They form a sort of oligarchy, to whose decrees those who study medicine at the bedside only must needs submit, often with a subconscious feeling of their own inferiority I can not myself resist the opinion that the man of the microscope and the culture tube occupies just now a place of too great importance, at least in the minds of the medical student and the younger practitioner

The laboratory is rendering immense service to practical medicine to day, but it can not do away with the necessity for careful bedside observation of the sick, nor are its conclusions to be regarded with the infallibility which, in the minds of many, attaches to them The student of to-day is likely to gain the impression that unless they rest on laboratory confirmation all diagnosis is doubtful, all prognosis uncertain, and all therapeutics unscientific The laboratory has its limitations which are as distinct as those of clinical medicine. It is to be regarded as supplementary, but not as the whole thing

I have already said that the important part of the training of a physician is the formation of the habit of making his own observations and of drawing correct conclusions from them He who flies to the laboratory for a solution of every problem presented in his practice soon comes to be dependent and neglectful, to distrust his own observations and, finally, to undervalue all clinical observations While, therefore, we appreciate this indispensable aid to medicine, let us not lean on it to the weakening of our powers of reasoning and observation The men of the past who have given us those marvelous descriptions of disease derived their knowledge from careful personal observations with little aid from other sources Let us see to it that this sort of study does not become a lost art

* Address delivered at the opening of the College of Physicians and Surgeons New York Sept. 26 1900.

MEDICINE AS AN ART

Time was when medicine was thought of solely as an art, and the science of medicine can hardly be said to have existed at all. Until very recently nearly all who bore the title of doctor of medicine were practitioners To-day there is a constantly increasing number who enter medicine with a view to becoming teachers, investigators, hygienists, public health officials, etc., but our medical education should not be shaped chiefly by their special interests or needs Even in the aggregate their number is small when compared with the great body of medical practitioners The lives of this class will be devoted to the care of the sick and injured, which they will do more or less efficiently according to their training and individual ability For this class the art of medicine possesses an interest and importance which is hardly exceeded by the science of medicine, indispensable as that is More men fail in the practice of medicine from their inability to understand and manage people than from their ignorance of medicine, colossal though at times that ignorance may be

Exactly what do we mean by the art of medicine and how is it to be studied by one entering the profession? Medicine as a science has to do with disease, medicine as an art, with people suffering from disease The difference between these two is a very real and important one. The science of medicine the student may learn from books, from lectures, in the laboratory, and in the postmortem room The art of medicine, or the manner of using this knowledge, he may acquire to some degree by a study of the ways of successful physicians, but in the main he must learn it through his own experience In his, his previous general education and training and his experience in and his knowledge of the world count for much

Tact.—The natural gift that perhaps contributes most to success is tact. It is called into requisition every hour of a physician's life. To meet and greet patients properly, to take a history which shall be at once brief, but accurate and comprehensive, to inquire into the innermost secrets of the private life of a man or woman with such tact and delicacy as to encourage confidence, but not give offense, to announce a prognosis which takes away all hope from an anxious family in a manner at once honest and sympathetic, to make a physical examination without giving pain or offending the sensibilities of a patient, and, at the same time, with a thoroughness which the gravity of the responsibility assumed demand, to make local applications in the way which shall cause the minimum amount of discomfort or pain, to combine unpleasant drugs so as to obtain the effects desired without unnecessarily disturbing the stomach or taste of the patient, to give personal attention to the minor details which contribute to the comfort of the person who is ill even though his disease may be incurable, or, on the other hand, not serious these are some examples of the physician's art They are well worth his time and thought Besides, we should not omit to mention the treatment of all patients, no matter how humble their station, with courtesy and consideration.

Ability to Inspire Confidence.—No part of the art of the physician is so essential to success as the ability to inspire confidence Possibly so fundamental a quality as this should not be called an art, certainly it can never be artificial While it belongs naturally to some persons, it can, to some degree, be cultivated by all The qualities on which it depends should at least be appreciated by every one While a certain something which stimulates confidence may be inspired by the easy-going, optimistic man of plausible speech and sufficient assurance, yet the patient soon distinguishes the real thing from its imitations At bottom the power to inspire confidence rests on ability and strength of personal character or integrity, and on nothing else does it long endure

Said a gentleman to me, in speaking of James J Hill, that he never left him without the feeling that he ought to sell everything else that he possessed and invest all in Mr Hill's properties Such a power to influence one's fellowmen is valuable in any calling, but in medicine it is indispensable To be able on a short acquaintance, often after but a single interview, to inspire such confidence that a person may be willing to entrust his own life or that of one of his family to your judgment or skill, is a rare gift Something of this power must be in the possession of every successful physician With the world at large it counts for more than scientific attainments

Will Power.—Next to the ability to inspire confidence must be placed that force of character which is required to make the patient act as we wish him to do, so to influence his will that he will carry out the advice which has been given.

Discretion in Speech.—Again, if he would preserve the confidence he has inspired, the physician must have discretion in speech To know the family secrets of an entire community and never by word or look betray them requires rare judgment and self-control on the part of the physician, and also, we should add, of his wife, whom he too frequently makes his confidante in such matters

Sympathy.—Sympathy more than any other quality wins the hearts and confidence of patients The cold, calculating man, even though he be exact and skilful in his science, has never a warm welcome in the sickroom To be only "a case," however interesting, and not a suffering fellow-being, is what a patient particularly abhors, and rightly The physician should be hopeful and encouraging without being untruthful, flippant or insincere He must have a keen sense of appreciation of exactly what it is that people most need in a physician They call him when they are in pain, in trouble or in alarm Besides physical relief, they want a certain moral support, some one to lean on, to allay their fears if they are groundless, as more often than not they are found to be.

Regard for the Sensibilities of the Poor.—One should never forget that the poor, as well as the rich, have their sensibilities which are often sorely wounded by the thoughtless and inconsiderate way in which they are treated by the physician of the hospital or dispensary It is certainly true, as has often been remarked, that the poor have always proved the young physician's stanchest friends, whom he can not well afford to neglect or offend

I have dwelt at some length on the present tendency to ignore the humanities of our profession and to think too much, or more exactly, too narrowly of medical science and too little of its practical application in real life My reason for so doing is the feeling that this tendency is growing among us, fostered, as it often is, by habits acquired through education abroad The importance to the physician of the virtues of self-control, honesty, frankness, sincerity and of such personal qualities as tact and sympathy should never be underestimated by the young physician, but should be cultivated with the

same assiduity as physical diagnosis or operative surgery

TEMPTATIONS TO BE RESISTED

Commercialism—Of the prevailing tendencies in medicine the one most to be deprecated is that to commercialism It is perhaps not surprising that our profession, in common with other callings, should feel the baneful influence of this spirit of our age It is only another evidence of the fact that, in the public mind, material and financial success has come to overshadow every other form of achievement Our times have witnessed many examples of the debauching of the legal profession to attain unscrupulous corporate ends The law, it is said, has almost ceased to be a profession and has become only a business, adopting business methods and business standards May this never be true of medicine It is perhaps not to be expected that human nature should be changed by attaining the dignity of writing itself M D But inasmuch as the traditions of the medical profession are nobler and its responsibilities more sacred than those of most of the professions, the more to be deplored is the spirit of which we are speaking

There are several different ways in which the commercial spirit may manifest itself in medicine One of the most common springs out of an inordinate ambition for immediate success It is not natural, it certainly is not desirable, that great professional success should come at once to a young physician just out of his college or hospital Time is necessary for experience to accumulate and judgment to ripen He who makes undue haste to succeed shall not be blameless One with such ideals before him begins by making the shortest possible cut to knowledge He often starts in practice as a specialist and wishes to be known at once as such He is familiar with the fact that advertising is the secret of success in modern business That shrewd advertising may bring business in medicine as well as in trade, the success of the numerous charlatans bears witness But he does not wish to become an advertising quack and see his card in the morning paper He adopts other devices He advertises himself to his friends and acquaintances His wife bends all her energies toward placing him before the public He cultivates the acquaintance of the newspaper reporter, and soon his name finds its way often into the public press He is interviewed in regard to the prevailing epidemic, or he is credited with performing some remarkable operation, or with some new ideas on the subject of the treatment of cancer or tuberculosis In medical literature also, his name is often seen He rarely loses an opportunity to appear at medical meetings and is always ready to discuss the paper of the evening His written contributions are apt to take the form of a citation of cases in which the newest remedy has been used whose real purpose is to exploit the remedy and the doctor at the same time, his reward being a check from the manufacturer His articles are then circulated as the "latest literature" on the remedy in question There are other ways innumerable in which the advertising doctor seeks to advance himself To narrate them is not profitable nor interesting

To some such practices as those described may seem only in bad taste to others possibly as examples of an enterprise almost meritorious But it is hard to draw the line as to how far one may go and yet preserve his reputation Another man whose moral standards are not so high or whose necessities are greater actuated by this same motive to get business by every possible means does not hesitate to take advantage of another physician or to gain at his expense He may even be tempted to go to greater lengths and finally end in practices absolutely dishonest

Judgment Biased by Monetary Considerations—The man who allows his mind to be dominated by a desire for financial success readily falls into another temptation, that of allowing his professional judgment to be warped by monetary considerations Such a thing may come about so gradually that the man himself may hardly be conscious of it.

A well-known and very successful gynecologist said to me once that he had reached the conclusion that no man could be strictly honest and conduct a private hospital This statement, although perhaps an exaggeration, expresses an important truth The temptation may be great The enterprise has imposed heavy financial obligations It has not proved the success the surgeon had anticipated The year has been a poor one, rooms are vacant and expenses are going on A well-to-do patient seeks his advice An operation is not necessary and, though at another time the surgeon would not himself have advised it, he finds it easy to do so now, and possibly justifies himself by the thought that many of his colleagues would do the same Such a step once taken, a similar decision is reached the second time with fewer misgivings, and soon the policy of doing operations with insufficient indications may become his established practice If not an operative case, the patient may be induced to submit to prolonged but unnecessary and even useless treatment There is a subtle temptation here for every physician or surgeon whose eye is always on the almighty dollar, but it comes with increased force to one whose financial needs are great His vision of right and wrong must be very clear and his ethical standards high not to be biased in such emergencies

Two years ago I was in attendance with another physician on the young child of a wealthy merchant, who was seriously ill and over whom was hanging the possible necessity of a grave surgical operation The parents were naturally very anxious When, after one of our consultations, the surgeon had left the house, the father said, "Do you think that man's judgment in deciding to operate would be influenced by the fee he would receive for it?" Happily, in this instance, I could say, "Emphatically no" Nor do I believe there are many men in the profession of whom it would be true But this anxious parent expressed a distrust which many others have felt Conceive, if you can, a condition of society in which such a feeling of suspicion should be general or worse still, when it should be justified What technical skill can ever take the place of moral character in a physician or surgeon? High ethical standards have been maintained in the past by the great body of physicians to a remarkable degree, often in the face of great temptation Let us hope that the ideals of the physicians of the future may be just as high

Medical Graft—There is one other phase of commercialism seen in our day which may be characterized as medical graft This man does not conceal the fact that he is in medicine for what he can get out of it With respect to every transaction he adopts the politician's anxious query, 'Where do I come in' His methods are well known He visits the specialist the surgeon or consultant ostensibly in behalf of his p[illegible]t and lets it be known that he expects "t[illegible]ge" of th in case the patient can [illegible] same time that if this

consultations in the case of other patients, and has other work which he can turn over to the surgeon. Medical grafters of this type, I am glad to say, are not numerous, but they are, I must believe from my information, increasing rather rapidly. Such a man may not be at heart dishonest. Let us try to follow his mode of reasoning. He begins by contrasting his own small fees and modest income with those currently reported of the specialist or surgeon. "Why should I not receive a suitable commission for the business I can control? There are plenty of skilful men who are willing to divide their fee with me. The patient is well served. Who, then, can complain?" Such a man belongs in business, not in a profession. He regards the patient as something in which he has personal or property rights, as a marketable commodity, which he is at liberty to dispose of to his own best advantage. He does not state it to himself in this way, for if he did he would see his error. But when such a principle of action is once adopted the interest of the patient is no longer his chief concern, but his own pocket.

There is yet another form of medical grafter who exacts from the apothecary a percentage of the receipts from his patient. "Perfectly legitimate," he says to himself, "I can command so much business, why should it not be worth something to me?" Soon, however, his interest is not that his patient obtains the best quality of drugs, accurately dispensed, but that his prescriptions are filled by the apothecary who promises him the largest percentage.

Why have I taken your time to rehearse this unsavory tale of greed and selfishness masking itself under the cloak of professional service? Chiefly that I may warn those who have not yet begun their professional work of certain temptations they are sure to encounter. Let those of you who have never felt the pressure of financial straits be charitable and let those who have be watchful.

ALTRUISM

Something more is expected in professional life than in business. Be he lawyer, teacher or physician, his first, his whole interest, should be that of his client, his student, his patient. The physician starts out in life to serve his fellow-men, and the better the service he can render the greater his success, but the moment he comes to place his own interest above that of his patient he is lost. He has yielded to the same temptation as that which has brought disgrace and wrecked the reputations of many other men in positions of trust and responsibility in the business world.

When Napoleon III, in an interview with Pasteur, expressed surprise that he should not try to turn his discoveries to a source of profit to himself, Pasteur replied that in France a scientist would consider that he lowered himself by so doing, that a man of science would complicate his life and risk paralyzing his inventive faculties if he were to make money out of his discoveries. His time would be too much occupied to be free for new investigations.

Such has always been the spirit of the great minds in medicine. Let us be thankful for this *uncommercial* spirit which has been and is still the glory of our profession, which has given the results of its labors freely and without stint for the benefit of humanity, which has scorned to keep secret any discovery or to protect by patent any operation, instrument or device for the cure of disease. There is no antidote for commercialism like the love for science. If this is preserved, that can not flourish.

We constantly hear the statement that made medical science is losing its hold on the public. When one witnesses the extent to which quackery in one form or another flourishes, he may perhaps be disposed to believe that such is the case. I am inclined to think, however, that as a profession we get from the public about what we deserve, and if it be really true in any community that medicine is not held in so high esteem as it once was the principal reason is not lack of skill or scientific training, but because we have departed from the traditions of our fathers and have come to adopt lower ethical standards. It is to me always interesting and instructive to hear persons discuss their family physicians. The highest praise which can be pronounced and the one fact on which they dwell with the greatest satisfaction is that he can be trusted, that he can always be depended on to do his best in every emergency, but that he will not take risks in attempting what he is not competent to do. What avails the other qualifications of the physician if he has not been able to establish this feeling in his patient?

ELEMENTS OF A SUCCESSFUL CAREER.

The dangers which attend professional life are many. The road to honor and success has many pitfalls which are at times difficult to see and avoid. At the very beginning of his career the young professional man should definitely settle a few things, such as what is to be his chief aim and what his standard of success. Permit me to suggest for your adoption three general principles or rules for guidance in your professional life. The first concerns your attitude toward your work, the second, your relations to your patients, the third, your relations to your colleagues in medicine.

Love Your Work.—The physician's attitude of mind toward his work goes far to determine his enjoyment of it. His cares are many and his responsibilities great, the drudgery of his work soon becomes wearisome, unless in all and through all he can keep his scientific interest in his profession. He must love his work if he would succeed in it. He may not retain through life all of his early enthusiasm, but as long as he lives he should be a student of medicine. It is only this interest, coupled with the thought that he is rendering helpful service, which lifts the practice of medicine above the treadmill of routine and brings genuine satisfaction and happiness in the midst of arduous labor.

Serve Your Patients.—The rule which should govern a physician's relation to his patient, although at times difficult of application, may be stated in a few words. He should always act in the best interest of his patient. Under no circumstances should he allow self-interest, expediency, or, in fact, any other motive to influence his judgment or his action. This principle once accepted, he can seldom go wrong, but if a firm stand is not taken at the outset, and if other considerations are permitted to weigh in his mind, little by little he may come to lower his ethical standards until he finds himself drifting in dangerous waters where shipwreck is only a question of time or circumstance.

Treat Your Professional Brethren Generously.—The rules by which the relations of a physician to other members of his profession should be determined have been in the past a subject of much discussion. At different times various codes have been drawn up which have attempted to formulate proper rules of conduct. The relationships of physicians to one another may be and often are among the most delightful known, whether they meet in associations for scientific discussion or as

fellow-workers in the great cause of helping humanity They form a sort of guild or brotherhood all over the civilized world There is among them a sympathy, a spirit of fraternalism, which all who have known it must pronounce as one of the greatest joys of life Such the physician's relations may be, everywhere such they have always been among the great souls of our profession

But it is humiliating to admit that, owing possibly to the very personal character of the competition in the practice of medicine, the feeling of rivalry between physicians too often predominates over every other sentiment Even without deliberately intending to do so, they readily yield to the temptation, by unkindly and unfraternal criticism, to undermine the influence and to injure the reputation of their colleagues In smaller places, particularly, where each man works most of the time by himself, the petty jealousies of physicians are very common, but most undignified and unworthy

Nothing does so much to weaken the influence of the profession as this spirit. The public has no patience or sympathy with it. If the physician's outlook were a larger one, his interest in science greater, this could not endure He should cultivate a liberal attitude and, conscious of his own mistakes, be charitable toward those of his fellows This generous spirit always begets generosity, while the man who always stands on his dignity, ever watchful lest his rights are encroached on, finds himself with a grievance most of the time In all intercourse with others of his profession there is only one rule for the physician's guidance, viz to act toward them as he would wish them to act toward him

CONCLUSION

I have pointed out some of the tendencies and alluded to some of the dangers which to-day threaten medicine as a profession Its future glory or shame rests largely with you who are the students of to-day See to it that you always stand for the dignity and honor of your profession If the physician's life is a strenuous one, its rewards are many and are within the reach of every one who with diligence and unselfishness will seek to serve his generation It is the law of the moral universe that there are no short cuts to knowledge, no such thing as ready-made experience, and no counterfeit for character Real and lasting success rests now as always, on honest work and personal worth, or, as Lowell has put it,

"God's price is high, but nothing else
Than what He sells, wears long"

14 West Fifty fifth Street

MULTIPLE NEURITIS SIMULATING PROGRESSIVE MUSCULAR ATROPHY

WITH REPORT OF CASES *

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Although multiple neuritis and progressive muscular atrophy both have their pathology in the lower neuron for clinical diagnosis and treatment it is necessary to differentiate between disease of the peripheral nerves and that resulting from anterior horn degeneration The ordinary type of polyneuritis with sensory disturbances hyperesthesia followed by anesthesia, tenderness of muscles and nerves, combined with absent tendon reflexes, flaccid paralysis, atrophy and reaction of degeneration, will rarely cause difficulties in diagnosis It is quite different when the neuritic processes are very extensive, when sensory symptoms are either absent or insignificant, and when muscular atrophy is found over large territories

We have been taught to study the distribution of muscle atrophy in such cases and authorities agree that in progressive muscular atrophy the muscles are usually affected according to their physiologic grouping in the cord, while in peripheral neuritis muscles are seized that have a common innervation regardless of segmental grouping

This rule only holds good in the majority of instances, for cases of peripheral neuritis occur in which the atrophies seem to have a distribution identical with that found in progressive muscular atrophy

It is well to remember that cases of progressive muscular atrophy of the spinal type are rather rare and that pathologic examination has proved many a case of supposed spinal atrophy to be a neuritis

Notwithstanding the growing tendency among modern writers to classify neuritis with anterior horn disease under "neuronitis" or lower neuron disease, it seems advisable to adhere to the old classification, because the latter compels a more minute clinical analysis, which is quite helpful in prognosis and treatment

In the following cases of (1) alcoholic polyneuritis, (2) lead paralysis and (3) progressive muscular atrophy, a similarity and even identity of symptoms will be noted They demonstrate among other things the futility of attempting to diagnose a case from a mere objective examination, and emphasize the necessity of studying the etiology and course of the disease

CASE 1.—A B, aged 30 bartender, married, gave a negative family history and an uneventful personal history, he had measles, appendicitis and an operation for gallstones several years ago For nine years, while a bartender he consumed ten glasses of beer and three of whisky daily, and in addition, indulged in a monthly "spree" Venereal infection is denied and there were no evidences of lues

Present History.—About three years ago he noticed a slight wasting of both thenar eminences and a deepening of the interosseous spaces, followed by general weakness in the hands and arms, and double wrist drop within one and one half months from time of onset The condition in the upper extremities was progressive so that at the end of a year he was unable to lift the arms above the level of the shoulders and his hands were practically powerless With the exception of occasional attacks of vomiting followed by exhaustion, no other symptoms were complained of at that time There were neither pains paresthesias, nor muscular twitchings in the parts affected nor were there palsies in any other parts of the body At various times he made attempts at abstaining from alcohol but failed About one and one half years from the onset of the disease his feet became affected The weakness and atrophy came on more rapidly than in the upper extremities and was preceded by burning sensations, tingling and numbness With in four months he lost the power of walking and in addition suffered excruciating pains in the epigastric region

He then entered Cook County Hospital Improvement occurred rapidly and within three months his pains had entirely disappeared The les[illegible] upper and lower extremities increased in vol[illegible]sion of [illegible] became possible and [illegible]our [illegible]ef the hospital worl[illegible]d seve In consequ

* Read in the Section on Nervous and Mental Diseases of the American Medical Association at the Fifty seventh Annual Session June 1906.

severity and within one week from the onset of sensory symptoms he was unable to stand Five weeks later he was unable to lift the arms from his body At about the same time his face appeared somewhat flattened and his voice seemed hoarse In addition, there appeared weakness of the upper lip, which made exposure of the upper teeth impossible Vision began to fail about two weeks later, objects appeared blurred, and he was unable to read The ophthalmoscope, however, revealed a normal fundus

Appetite was always unimpaired, there were no disturbances of deglutition, nor of the sphincters

Examination.—Patient appeared tall and emaciated, but presented no facial asymmetry, nor pupillary anomalies Vision was markedly diminished for distance and acuity Slight weakness was noticeable in the upper lip and whistling had become impossible Tongue, pharynx, larynx, and neck muscles were normal The chest was somewhat flattened and the pectoral muscles were atrophied The viscera were normal and the spine presented no curvatures All the shoulder muscles had atrophied, except the trapezius The arm, forearm and hand muscles had wasted and there was corresponding loss of power With great effort he could still elevate the arm to the shoulder level, but was unable to hold it up for more than a few seconds There was typical wrist-drop and the fingers were slightly clawed The thenar and hypothenar eminences had entirely disappeared and the interosseous spaces were deepened The grasp of the hand was without power Flexion of the fingers was barely possible, while extension was entirely abolished The left hand was slightly less affected than the right hand

While the lower extremities were generally weak, the atrophies were most marked in the dorsal flexors of the feet. Coördination and sensation were normal. Superficial reflexes were present and of normal intensity The deep reflexes could still be elicited but were much reduced

Examination in April, 1905, showed marked improvement in all the symptoms The typical ape hand was still present on both sides, also the atrophy of the lumbrical and interossei muscles The thenar and hypothenar eminences were still wasted The extensors and flexors of the forearm were greatly atrophied and very weak so that slight passive resistance could prevent their movements

The arms were fairly well preserved, he could now raise them over his head No atrophies could be noticed about the shoulder girdle There was no wasting of any of the trunk muscles and the lower extremities were not involved, except the muscles of the anterior surface of the leg and the dorsum of the foot The typical foot drop still persisted bilaterally The so called steppage gait was well marked so that the patient was compelled to raise his knees high in order to clear the toes from the ground. Coördination and sensation were normal The deep reflexes, though reduced, were present in the lower and absent in the upper extremities

After having been an assistant in the ward for several months during which time he enjoyed good health, he left the hospital feeling well, but still presenting the picture essentially as described

Summary.—A young alcoholic develops a painless atrophy of muscles in the upper extremities, followed about one and a half years later by similar wasting and paralysis in the lower extremities, but this time with sensory disturbances Within four months he recovers sufficiently to resume work, but two months later relapses into his former condition, and, in addition, develops neuritis in various cranial nerves He again enters the hospital and improves in every way, except that certain atrophies remain which do not differ essentially from those commonly seen in progressive muscular atrophy

The unusual features are a painless atrophy beginning in upper extremities, cranial nerve involvement, accession and recession of symptoms and stationary palsies and atrophies

Cases like the one just described are not common, but J Dreschfeld [1] after reporting a case of typical alcoholic neuritis with sensory findings, correctly says that "though hyperesthesia and hyperalgesia are prominent symptoms in this form of alcoholic paralysis, yet both of these may be absent and the motor disturbances occupy the foreground" He reports another case very similiar to the above, with a fatal termination "The nervous symptoms in this case," he remarks, "resembled those seen in chronic poliomyelitis, yet the history and the onset all stamp it as a case of multiple neuritis"

CASE 2.—C R., aged 65, single, painter, with negative family history, excepting tuberculosis, entered Cook County Hospital April 6, 1905 He had measles at 16, never acquired venereal disease, and never drank to excess His principal complaint was a so called nasal catarrh, which caused respiratory troubles at times At irregular intervals he suffered from attacks of gastric and intestinal colic, oftentimes accompanied by nausea and vomiting In addition, he complains of anorexia and constipation

Present History.—About three months ago, while at work, he suddenly felt the strength give way in his left hand A little later he incidentally discovered that some of the muscles in the left hand and forearm appeared wasted Later still atrophy and considerable weakness were noticed in the right hand and forearm He experienced no pain in the muscles or nerves

Examination.—Patient appeared poorly nourished and showed no anomalies of face or eyes The thorax was flattened and revealed abnormal depth of the left supraclavicular fossa. Rough breathing could be heard, but no adventitious sounds The hands and arms were atrophic, the thenar and hypothenar eminences had almost disappeared, the interosseous spaces had deepened The lumbrical and interossei muscles had wasted The thumbs were almost parallel with the other fingers, presenting a good example of the so-called ape hand The left upper extremity was more involved than the right

The flexors of the wrist were more affected than the extensors, but both were very weak. The right arm was somewhat the stronger of the two The right biceps was slightly atrophied, the other arm muscles seemed about normal size. The left deltoid was greatly atrophied in its middle and posterior portions, the biceps on this side showed only a slight degree of atrophy The left trapezius and serratus muscles were both paretic and wasted, as shown by the winged scapula and the inability to raise the arm over the head Other shoulder and trunk muscles revealed normal conditions The lower extremities were extremely emaciated, but did not show localized atrophies.

Fasicular muscular twitchings were very marked, even in a moderately warm room Coördination was normal in both upper and lower extremities There were never either subjective nor objective sensory disturbances The sphincters were normal The superficial and deep reflexes could be elicited with ease wherever the muscles had not entirely disappeared No electrical examination was made Heart and urine were practically negative The blood showed a moderate degree of anemia, but degenerated erythrocytes and basophilic granules could not be found

Summary.—A patient presents wasting and loss of power in the small muscles of the left hand, later of the right, followed by atrophy in the forearms, and, leaving out most of the arm muscles, shows wasting of the shoulder girdle, with no noticeable disturbance of reflexes, coördination or sensation

This is essentially a picture of the Aran-Duchenne type of progressive muscular atrophy, and yet the history of lead and the rather rapid development of atrophies must cause one to consider well before making such a diagnosis There exists besides considerable divergence of opinion regarding the pathologic changes caused by lead, some consider lead palsy a polyneuritis while others are equally emphatic in calling it a chronic anterior poliomyelitis, which is practically progressive muscular atrophy

M Bernhard,[2] for instance, reports two cases, one of subacute atrophic spinal paralysis, and a case of lead paralysis which he believed to be spinal in type He

1 Alcoholic Paralysis Brain 1884 1885 p 208

2. Berlin. klin. Wochschr., 1878 p 273

argues strongly in favor of the view that lead palsy is a spinal paralysis and cites Remak and Erb in his support.

In discussing multiple neuritis, Oppenheim[3] says "According to recent findings, pathologic examination of multiple neuritis has not only revealed changes in the nerves, but also in the cord, although the latter were rather slight While formerly all the symptoms in peripheral neuritis were explained by the changes in the nerves exclusively, recently pathologic proof has been accumulating which shows the cord to be affected in some cases" Leyden and Oppenheim have each described such a case and so have Minkowski and Thomsen. Oppenheim concludes, that while it is impossible to localize the pathologic changes exclusively in the nerves, the poisons which cause polyneuritis undoubtedly produce the greatest damage in the peripheral nerves

Thomas Oliver[4] speaks of lead palsy substantially as follows "Besides the classical wrist-drop there is occasionally seen the paralysis of the Duchenne-Erb group, sometimes the paralysis resembles the Aran-Duchenne type and rarely the leg and peroneal types of progressive muscular atrophy"

A case reported by Arthur von Sarbo,[5] of progressive spinal muscular atrophy from lead poisoning occurring in a man thirty-five years of age, who had an acute anterior poliomyelitis at five years, and who had worked in lead since his thirteenth year, first in a type foundry, later as compositor The picture presented was that of the Aran-Duchenne type of progressive muscular atrophy, but no postmortem was held In discussing the localization of the lesion in lead palsy, that is, whether the paralysis is caused by neuritis or poliomyelitis, he concludes that we may have either neuritis, poliomyelitis or myelitis It is as difficult to explain why in one case we have a neuritis, in another a poliomyelitis, and in a third a so-called encephalopathy, as it is impossible to give a satisfactory reason why we have in the one case arthralgias and in the other kidney disease

Even a superficial search through the literature was sufficient to convince me that authorities differ radically in their views on the subject It was therefore most favorable to our purpose that a postmortem examination could be had About one week prior to his death the patient developed an obstinate cough and irregular temperature ranging from 99 degrees to 102 degrees Large and small râles could be heard over his chest, particularly over the right side, while the left showed absence of breath sounds and dulness on percussion During this fatal illness the pulse and temperature did not rise above 112 and 102 degrees, respectively, there were 35 respirations to the minute The patient died Sept. 13, 1905, and the postmortem examination was held fifteen hours after death

The results in brief, were as follows Numerous old fibrinous adhesions of both pleuræ, the right pleura showed fresh fibrinous adhesions and about two ounces of straw-colored fluid containing flakes of fibrin Consolidation of the left lower lobe and a bronchopneumonia in the right lower lobe, chronic interstitial nephritis, fibrous myocarditis, atheroma of aorta, passive congestion of liver and hydatid cyst, chronic interstitial splenitis, hypertrophic gastritis, healed tubercle in left apex of lung No macroscopic changes were found in brain, cord or nerves

Pieces from various cord levels and from the sciatic, median and ulnar nerves were hardened and treated with Nissl, Marchi, Weigert-Pal and hematoxylon-eosin stains

The microscope showed no degeneration of white columns and no shrinking of anterior horns The Nissl bodies stained well with toluidin blue and no pathologic arrangement of the granules could be observed There was an unusual amount of pigment in the cells and the vessels of the cord were moderately sclerotic

No apparent differences could be seen on comparing sections with those of a normal cord It was only on reaching the peripheral nerves that distinct pathologic changes were discovered which could be summarized as parenchymatous degeneration In other words, the most important finding was a multiple neuritis which, of course, was rather a surprise, as the symptoms led one to expect cord involvement as well

It is not the object of this article to enter into a discussion of the pathogenesis of multiple neuritis, but it may not be amiss to state that considerable obscurity still exists even in the interpretation of the pathologic anatomy of this common disorder Some emphatically deny central disease, except as an extension of peripheral disease while Erb[6] and others consider all nerve changes a result of disease of the trophic centers, whether this can be demonstrated microscopically or not

Most observers, however, maintain that while pathologic changes have been detected in the spinal cord and anterior roots in some cases, the great majority of cases of multiple neuritis present no such changes

CASE 3—Z D, German, aged 40, single, entered Cook County Hospital, Oct. 26, 1905 He gave a good family history, but stated that an elder brother had a complaint similar to his, from which he completely recovered thirteen years ago and had remained well to this day This brother was an alcoholic and received treatment by hypodermic medication (morphin?) The case was probably an alcoholic polyneuritis

The patient had been a car cleaner, was always temperate in the use of alcohol and tobacco, and had never used lead nor arsenic. No serious illness was recorded and he denies venereal disease

Present Illness—About three years ago he suddenly experienced pain in the right hand which lasted a few days, then disappeared, to return in about six weeks in the right shoulder and arm. It appeared in the right shoulder and arm. It returned at irregular intervals and lasted from a few minutes to a half One month later a decided weakness was noticed in the right arm and three months later [illegible] was positive that the atrophy began in the [illegible] and spread to the arm and forearm and then to the hand. One year after the beginning of the [illegible] side the left side became similarly affected. Two years ago wasting in the lower extremities [illegible] experienced pain in them Nine months later [illegible] ings were first seen in the muscles of the [illegible] ago he was still able to walk about the [illegible] weakness in the hands compelled him to [illegible] he remained for five weeks and then [illegible] In this he was admitted to the County Hospital for the first time. On admittance his left [illegible] was in same condition as at present [illegible] was transferred to the [illegible] hypodermic injections [illegible] certain that this [illegible] and he gained [illegible] end of four months he returned home [illegible] remained at home for three months, and again entered the [illegible] Hospital, at which time he first came under

3 Berlin klin Wochschr 1890 p 546
4 Gaulstonian Lectures, 1892
5 Deutsch. Ztschr für Nerven xix 249

6 Neurol Centrbl, 1887, No 21, p 481

Examination—The man was slightly emaciated, with arms dangling, he was seen to drag his right foot. The difficulty appeared to be in clearing the toes from the ground, and there was a good example of steppage gait. The face showed no anomalies, eyes reacted to light and to accommodation, and the fundi were normal, the tongue could be protruded in a straight line. An examination of viscera and excretions, including urine, gave normal findings. Blood examination gave the following results: Erythrocytes, 4,800,000, leucocytes, 11,000, polymorphonuclears, 85.8 per cent., mononuclears small, 7.6 per cent., large, 6.5 per cent.—practically normal figures, except for a slight leucocytosis.

Muscular system: Arms, forearms, shoulder girdle, thenar and hypothenar eminences had wasted. The deltoids, supra and infraspinati had entirely disappeared. Pectorales, latissimus dorsi and the gluteal muscles were atrophic, the right gluteal group more than the left. All the muscles showed marked fibrillary twitchings. The cranial nerves were not involved. Hands, arms and shoulders were almost powerless. Adduction and abduction of fingers was abolished, demonstrating paralysis of lumbrical and interossei muscles. The grasp of the right hand was almost *nil* and that of the left was only slightly better. Supination of the hands was impossible, pronation was barely possible in the right hand, though slightly better in the left hand. Arm and forearm flexion could not be accomplished. Extension of right forearm was impossible and was very weak in the left. The arms could neither be abducted nor adducted. The left shoulder could be slightly elevated, but not the right. All movements were better executed on the left side. The legs showed considerable loss of power, the right more than the left. Flexion and adduction were stronger than extension and abduction, although both kinds of movement were extremely weak. Head and neck muscles were unaffected and also the erectores spinæ, but the abdominal muscles were paretic.

Sensation: The touch, temperature and pain senses were unimpaired.

Coördination: Normal everywhere, muscle and joint sense perfect.

Superficial reflexes: Present, but sluggish, except the abdominal, which was absent.

Deep reflexes: Patellars were present bilaterally, but somewhat reduced, Achilles tap gave no response, there were no Babinski, Oppenheim or Gordon signs, elbow and wrist jerks could not be elicited, masseter jerk was normal. Mentality and speech were not affected.

Second Examination—An examination made May 10, 1906, revealed the following: Some wasting of cheek muscles, partial atrophy of sterno-mastoids, head had a tendency to fall forward owing to weakness of posterior neck muscles, thighs showed marked wasting of all muscles, adductors were least involved. The legs were generally atrophied, less on posterior surface. Respiration showed marked impairment of diaphragmatic excursion on right side. The abdomen was distended and markedly tympanitic on account of paresis of the abdominal muscles. Owing to the development of extensive wasting and paralysis of the lower extremities, the patient had now become bed ridden. The sphincters had never been affected. Within the last two or three weeks he had several attacks of dyspnea which were rather alarming.

Summary—Gradual wasting of muscles with subsequent paralysis, absence of objective sensory disturbances, absence of sphincter trouble, reduced reflexes, constitute a symptom-complex characteristic of spinal atrophy, especially in the absence of a history of alcohol or metallic poisoning.

Termination of Case—While this article was in the editor's hands the patient died during one of the attacks of suffocation from which he had lately suffered. This would indicate involvement of the bulbar nuclei, besides anterior horn degeneration.

The postmortem examination will be reported in full at some later date. Up to the present, Dec. 9, 1906 only the cord has been examined and distinct shrinking of anterior horns and wasting of cell bodies have been the most important findings. The diagnosis of progressive muscular atrophy has therefore been verified.

It will be observed that the symptomatology of this case does not differ materially from the cases reported in the beginning of this article. Pain was a first symptom, there was some improvement, then came a relapse, and altogether the course was rather somewhat subacute.

CONCLUSIONS

1. Clinically, multiple neuritis may simulate a spinal atrophy as regards distribution of paralysis, absence of sensory symptoms and protracted course.
2. Progressive spinal muscular atrophy may resemble multiple neuritis in the presence of pain, remission of symptoms and subacute course.
3. Etiology and course are still our best guides in the clinical diagnosis of the various muscle atrophies.

100 State Street

SOME LEGAL PHASES OF THE "PATENT MEDICINE" QUESTION *

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Taking the expert testimony, which has been presented on the question under consideration, to be a substantially correct statement of the facts, and conceding, in fairness to the prisoners at the bar, the "patent medicine" men, that these witnesses, filled with zeal as to the merit of their case, have perhaps gone further than the court, in the impartiality incident to its position, would go in its findings of fact, there can be no question, in the minds of those untrammeled by self-interest, that the "patent medicine" business, as exploited to-day, is a serious evil.

That the methods frequently employed for the purpose of inducing the public to buy these remedies are positively dishonest and fraudulent, and that the remedies themselves are in many instances of no medicinal value, can not be questioned.

Leaving for the moment the more serious phase of the question, the harmful physiologic effects which naturally follow the use of many of them, the fraudulent nature of the business, when existing in the case of any remedy, affords ample justification for the prohibition of its sale, and the punishment of the agency responsible for it, by the exercise of public authority. Nor is the defrauded purchaser remediless, though, as I shall attempt to show, any action on the part of the injured individual can have little effect in correcting the abuses incident to the business.

PRESENT LEGAL REMEDIES INADEQUATE

When fraud has been practiced, and the purchaser has been induced by deception to buy a worthless article, and the only loss he has suffered has been to his pocket, his damages would, of course, be limited to the price paid for the article. In such cases the expense and difficulty of securing legal redress, in practically every instance, would be so far in excess of the relief sought, that resort to such measures would, of course, be foolhardy, as the time of courts and men is too valuable to be taken up with such trivial matters as the price paid for a bottle of medicine.

The same is true as to the legal remedy of an individual for damages suffered by reason of the failure of a "guaranteed" article to cure. Rarely are these guarantees framed with the idea of creating, nor do they often

* Read before the Winnebago County Medical Society at Oshkosh, Wis., Nov. 15, 1906.

create, any liability When they are so drawn that a legal liability can be construed out of them, it is so weighted with conditions, which must be observed by the person using the remedy, that the requisite particular combination of circumstances necessary to create such liability could rarely if ever, exist And in cases in which there is a positive guarantee to refund the money if the purchaser is dissatisfied after using the contents, or, as is usually the case, a specified portion of the contents, rarely does the purchaser come back for his money, and for obvious reasons, he may think he has not given it a fair trial, Nature may have corrected his condition of ill-health, or, as is usually the case, he deems it too trivial a matter to warrant the expenditure of the effort involved in getting back his money, with its attendant humiliation When the money is refunded, the loss of the profit is merely charged up to advertising expense the "guaranteed cure" advertisement and the sale of the remedy go on

While on this phase of the subject, one of the many difficulties which presents itself when an attempt is made legally to disprove some of the extravagant claims made by the proprietor as to the value of his remedy, is that he frequently has a formidable array of witnesses, who stand ready to testify to the beneficial results experienced by them from the use of the remedy In many instances they are sincere in their statements and thoroughly believe they have been benefited The causes which contribute to the correction of a condition of ill-health may be varied and numerous, it may be the remedy administered, it may be the psychologic effect on the mind of taking a remedy in which the patient has faith, based on the testimony of others or the claims of the manufacturer, it may be that natural processes have corrected the trouble The effects, in particular cases, of many of the various forms of medical treatment are incapable of positive demonstration, by reason of the fact that we have no means of knowing how the patient would have come out in the absence of such treatment The natural conclusion, however, of the ordinary individual taking a particular medicine for a particular condition of ill-health, is to attribute improvement, if it result to the remedy rather than to something else Hence the difficulty of disproving many of the extravagant claims as to cures effected, based, as they often are, on opinions, which, though truthfully held, may have no foundation in fact Cases doubtless exist in which substantial damages might be recovered against the manufacturer of a nostrum, from the use of which in accordance with the published directions death or injurious physiologic effects have resulted Liability in such cases however, is greatly limited by the extreme difficulty of proving that the injury is the natural result of the administration of the remedy, uninfluenced by other causes that the prescribed dose was taken and all directions were followed And, further, there is frequently great inequality in the power of the respective litigants to carry on a lawsuit to a successful termination In the greater number of instances the party seeking redress belongs to the poorer class, while the manufacturer of the remedy is well equipped with the means to fight a legal battle.

There are, it is true, a few cases of this kind in the books in which damages have been so recovered, but so far as practical results go in the way of any general correction of the abuses incident to the traffic any legal remedy the individual may have for damages to his purse is utterly ineffective Nor are criminal prosecutions of much, if any, more effect, on account of the increased difficulties of satisfying the requirement of proof beyond a reasonable doubt, instead of proof by a preponderance of the evidence, as in a civil action

So far as any of the legal remedies mentioned are concerned, it seems to me that it is useless to expect from them any adequate relief, nor is it possible to formulate any law which can have any great general effect, if its application is limited to the correction of the mischief or the punishment of the offender, after the damage is done The only practical line along which effective work can be done is along the line of limitation of the sale of remedies, demonstrated to be worthless or injurious, by means which will protect the public from the imposition of the fraud and the possibility of injury from their use

THE NEWSPAPER AND "PATENT MEDICINES"

The newspaper is denounced, and deservedly, as one of the chief agencies responsible for the extent and prevalence of the evil In a sense, the moral responsibility of the publisher, who, for a consideration, sells to another the means by which fraud and perhaps crime can be perpetrated and the accomplishment of these purposes made easy, is greater than the responsibility of the originator, in that the former uses the vantage of his position, by reason of which he can easily reach the ear of the multitude of his fellow-men, to their undoing and his profit.

In principle, there seem to be no reasons why a publisher, knowing the falsity of an advertisement, or aware of the consequences which may naturally be expected to follow the use of an article advertised, should not be subjected to the same liability as the proprietor himself, on injury resulting to a person induced to use such article, by reason of an advertisement for which the publisher is responsible In such cases, the publisher becomes a party to the fraud or crime, and the agent of the principal and, as such, responsible for the consequences of his wrongful act. We have, however, seen the practical difficulties which attend attempts to secure damages against, or to punish the proprietor, and when we add to these difficulties the additional one of proving guilt knowledge on the part of the publisher and of fixing responsibility on any one of the numerous heads of the modern newspaper the inadequacy of any such remedy, granting that it exists, becomes at once apparent

I have made a somewhat diligent search of the books but have failed to find any case reported in which a publisher has been held liable for damages resulting from a false advertisement or punished for the publication of the matter unless the same came within the condemnation of some statute or ordinance. There can be no question but that the police power of the state is sufficient to prohibit the advertisement of articles and nostrums dangerous to the health and subversive of [illegible] States including Wisconsin have enacted laws providing, under heavy penalties, that no person or corporation shall publish or cause to be published any advertisement or matter tending to convey false information as to the character of any article, and providing that a violation of such a statute prohibiting the publication of false advertisements in any publication devoted principally to the dissemination of news, reports etc. Many [illegible] prohibiting the advertisement of [illegible] preventing abortion. The state of [illegible] passed a law prohibiting advertisements [illegible] ment of "venereal [illegible]

diseases In Germany, newspaper advertisements are subject to stringent regulation An article in THE JOURNAL of the American Medical Association, Nov 25, 1905, states that, in 1903, the confederated states of Germany formulated a list of secret remedies, the advertisement of which was prohibited Some of the manufacturers then changed the names of their preparations and advertised them under the new names Suit having been brought against one in Prussia, and one in Baden, it was decided by the Prussian court that, the name having been changed, the article could be advertised, the prohibition applying only to the advertised name, the Baden court held the product to be the thing prohibited from advertisement, and that changing the name made no difference Even under the Prussian ruling the law should, it seems, prove effective, as it is the name rather than the composition of these articles that sells them So far as legal measures are concerned, it seems that regulative and prohibitory measures, directed against the publication of advertisements of such articles as can be proved of fraudulent character or injurious to health, will prove the most effective

The public is coming to understand that liberty of the press does not mean license to publish anything the publisher may see fit to put into his columns, but that the liberty of the press, protected by constitutional guarantees, is subject to the modification that such liberty shall not be used in such a way as to interfere with the proper exercise by others of their own rights Freedom of speech and press does not include abuse of the power of tongue or pen any more than does freedom of action sanction abuse of one's powers to the injury of another in the enjoyment of his equally fundamental rights, the lawful use of his property, and the pursuit of happiness in the legitimate exercise of his occupation or business The moral responsibility of publishers who take advantage of the public nature of their business and of the vast power thus given them to defraud the public, is becoming more and more generally recognized, and when the recognition of such responsibility becomes sufficiently extensive, and the public arrive at an appreciation of the extent to which it is abused, the resulting public sentiment will soon crystallize into measures and laws of no uncertain nature to check and limit the evil.

WORK OF THE POSTOFFICE DEPARTMENT

Perhaps the most potent agency which has been found to deal with the subject has been the postoffice department, which, through its power to issue fraud orders, has put out of business countless fraudulent schemes, depending for their successful accomplishment on false and misleading published matter Section 3929, Revised Statutes, U S, provides that the postmaster-general may, on evidence satisfactory to him that any person or company in conducting any scheme or device for obtaining money or property of any kind through the mails by means of false or fraudulent pretenses, representations or promises, instruct postmasters to return to senders all mail addressed to such person or company, stamped "fraudulent" and to deny to such person or company the use of the money order department

The United States' statutes further provide that certain matter shall be non-mailable By the enactment of the simple statute that no matter advertising or concerning a lottery or similar gift enterprise should pass through the United States' mails, lotteries were put out of business The United States laws further provide that no letter, postal card or circular concerning schemes devised for the purpose of obtaining money or property under false pretenses shall be carried in the mails They do not, however, specify that the advertisement of any such scheme shall be barred from the mails, as is specified in regard to any advertisement of a lottery and certain other matters Obscene or indecent publications, articles designed or intended to procure abortion or to prevent conception, articles intended for any indecent or immoral use, and any advertisement or notice of any kind, giving information directly or indirectly, where or how, or of whom, or by what means, any of such articles may be obtained or made, are declared by United States laws to be non-mailable matter, and heavy penalties provided for their violation

The constitutionality of these statutes as abridging the freedom of the press has been assailed, but they have been held constitutional, and it has been held that the power of congress to establish postoffices and postroads gives it the power to designate what may, and what may not, be carried as mail, and when the circulation of the publication is not prohibited in other ways, but the government merely declines to become an agent in the circulation of matter which it regards as injurious to the people, and when the exclusion applies equally to all, the court holds these statutes do not deny to the owners or publishers any of their constitutional rights

Under the law as it stands, it hardly seems that the postoffice department has the power to issue a fraud order against a newspaper merely because it contains an advertisement concerning a fraudulent scheme, or that such newspaper becomes non-mailable under the provision referred to because it contains such advertisement Much effective work has, however, been done by means of these provisions of law

THE PURE FOOD LAW

The Food and Drugs Act, passed June 30, 1906, another most important piece of legislation, provides that the shipment from one state to another, or from any foreign country, or to any foreign country, of articles which, within the meaning of the law, are misbranded, is prohibited In case of drugs they are considered "misbranded" if the package fail to bear a statement on the label of the quantity or proportion of any morphin, opium, cocain, heroin, alpha or beta eucain, chloroform, cannabis indica, chloral hydrate or acetanilid, or any derivative or preparation of any such substances contained therein The term "misbranded" also applies to all drugs, the package or label of which shall bear any statement, design or device regarding such article or the ingredients or substances contained therein which shall be false or misleading in any particular, and to any drug product which is falsely branded as to the state, territory or country in which it is manufactured or produced

THE WORK OF THE INTERNAL REVENUE DEPARTMENT

Another important measure is the ruling of the internal revenue department, under Circular 673, that all medicines which contain alcohol, unless mixed with substances undoubtedly medicinal in character in sufficient quantity to give a medicinal quality to the liquor other than that which it may inherently possess, shall be regarded as liquor and require of the person selling them a revenue license

WISCONSIN STATE LAW

Section 4601c, Revised Statutes, Wisconsin, provides penalties for the sale of, or the having in possession with

intent to sell, any medicine known as patent or proprietary, or of which the formula is kept secret by the manufacturer, which contains morphin, strychnin, cocain or poisonous or narcotic alkaloid or drug, in any quantities which the state board of health shall deem harmful to the life or health of the public, unless the presence of the same be distinctly shown by a label on the bottle or package and on the outer wrapper thereof Many of these measures are of comparatively recent origin, and it seems probable that the near future will see them supplemented and added to in various ways which will make them more effective.

So far as I have observed, the public discussion of this question, in the magazines and otherwise, has been singularly devoid of practical suggestions as to methods of relief other than such as may result from a general understanding of the facts, whereby it is claimed that the newspapers, by reason of the force of public opinion will in time be obliged to purge from their columns objectionable advertising matter

SPECIAL NATIONAL LEGISLATION SUGGESTED

While much can doubtless be accomplished through this means, there is much merit in the publishers' position that it is practically impossible for them to determine intelligently what advertisements are meritorious and proper and what are not While in many instances the facts can be easily obtained, in others the misleading, false or harmful nature of the advertisement comes to light only after careful investigation In cases of doubt it is natural that the self-interest of the publisher is apt to decide in favor of accepting the questionable advertisement It is probably too much to expect of publishers, actuated by motives of self-interest, that they will act with the same disinterestedness as an agency in which that element is not present Thus it seems to me desirable that some responsible governmental agency be empowered to determine whether, in the case of any article, improper methods are used in its public advertisement.

It would also seem desirable that, if possible, the sphere of this agency's operation should be national in its scope rather than limited to a state In view of its success along similar lines, the postoffice department seems to be the one most adapted for the purpose of securing the end sought As we have seen, congress has declared certain matters non-mailable, but the only instance in which it has specifically declared that a newspaper or publication is non-mailable by reason of its containing the advertisement of an article is in the case of lotteries, although by Section 3893 Revised Statutes, U S it is generally provided that any written or printed card, letter, circular book pamphlet, advertisement or notice of any kind giving information, directly or indirectly, where or how, or of whom or by what means certain specified articles can be obtained or made, shall be non-mailable, such articles being as follows Every obscene, lewd or lascivious book, pamphlet, picture, paper, letter, writing print, or other publication of an indecent character, and every article or thing designed or intended for the prevention of conception or procuring of abortion and every article or thing intended or adapted for any indecent or immoral use.

Let the definition of non-mailable matter be extended to include newspapers and publications containing advertisements of articles which are being publicly advertised through the mails by means of false pretenses representations or promises or which from their nature are injurious to the life or health of the public Give to the postoffice department, on its appearing that an article is being so advertised, or that the article advertised is of such harmful nature the power to make a ruling that any publication containing an advertisement of such article shall be denied the use of the mails, appropriate penalties being provided for any violation of the law

Make the rulings of the department subject to review by the courts, and afford to persons against whom the rulings may be directed proper safeguards to guard against injury from the improper exercise of such power Proper provision should also be made for the publication of such rulings in such manner as will give adequate notice thereof to publishers before the imposition of any penalty

It might also be provided that the ruling shall not go into effect until after a certain specified number of days from the time it is made, during which time the party against whom it is directed shall have the right to appeal to the court, and that, in case of such appeal being taken, the ruling shall not go into effect until passed on by the judgment of the court but that, on the ruling of the department being sustained, the penalty provided in the law be inflicted It is likely that the mere existence of such an agency, legally empowered to determine whether an article publicly advertised comes within the prohibited class, would do much in the way of regulating advertisements And with proper safeguards the honest advertiser need have no fear that such a law will interfere with the free exercise of his legitimate business

CONCLUSION

We must not, however, expect too much of legal measures There never has been, and never can be, enacted any law which will protect people from the consequences of their own folly So long as mankind is constituted as it is the fool killer will thrive and do business But in matters so affecting the public health and welfare of society as the administration of medicine and the treatment of disease the public has a right to insist that powerful and poisonous drugs shall not be foisted on them under the guise of harmless articles, that liquor, if sold, shall be sold as such and only under proper restrictions, and that some reasonable guarantee shall be afforded that an article publicly advertised is what it purports to be, and that, if these reasonable requirements are not fulfilled, there be some sure and direct way of administering punishment on the agency responsible for such failure, be such agency the proprietor of a medicine or the proprietor of a newspaper, through whom the former is enabled to reach the public ear and confidence

The benefits of focusing public attention on any question demanding correction can not be overestimated, as it is only in this way that the public can be brought to a realization of the facts When this is done when the inertia of public opinion is set in motion by an adequate understanding of the facts, the "patent-medicine" evil, like many others of greater magnitude will find an easy solution for it exists to-day only because the people do not understand

Such being the case the duty of those in positions of responsibility is clear and the value of such work as your society is doing can not be overestimated in its effect on public opinion by directing attention to the facts as they exist

THE OUTBREAK OF CHOLERA IN THE PHILIPPINES IN 1905

THE METHODS USED IN COMBATING IT, WITH STATISTICS TO JAN 1, 1906

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MANILA, P I.

According to the official records on file at the Bureau of Health for the Philippine Islands, the last case of cholera of the pandemic which commenced March 20, 1902, was reported to have occurred March 8, 1904 During that period 166,252 cases, with 109,461 deaths, were reported Reliable observers are of the opinion that at least one additional case occurred for each one that found its way into the official records

From March 8, 1904, until Aug 23, 1905, no cases are known to have occurred From time to time during this latter period suspicious cases, which clinically resembled Asiatic cholera, came to the attention of the Insular Board of Health, but the diagnosis could not be confirmed bacteriologically For the two weeks immediately preceding August 23, the number of suspicious cases increased In Manila, one occurred in San Pedro Macati, a suburb, one in a bakery in Paco, one in the San Miguel district, one case was that of a soldier in Cuartel de España, and several in the province of Rizal The cases in Manila were all carefully examined postmortem, and the intestinal contents subjected to bacteriologic tests by such competent observers as Dr R P Strong of the Government laboratory, and his assistants, and the case of the soldier was carefully investigated by the military medical authorities, and specimens examined at the Army laboratory which is maintained in connection with the First Reserve Hospital of Manila From both of these independent sources the results were reported as negative.

THE FIRST RECOGNIZED CASE

On August 23 a case developed in Bilibid prison which was a typical clinical picture of cholera After a few hours the victim succumbed At the postmortem examination the ileum was found to be deeply injected and filled with rice-water-like material, and the bacteriologic examination made by Dr R P Strong revealed the cholera spirillum of Koch. Thus occurred the first officially recognized case of cholera of the present outbreak

This patient was in an institution which is practically cut off from the remainder of the world, where all foodstuffs are permitted to enter only after the most rigid inspection, and where all food served, that could possibly convey cholera, is cooked at all times On account of dysentery, it is said that all drinking water was sterilized Therefore, it would seem that the routine precautions taken against dysentery should also have afforded protection against cholera The commencement of an outbreak in this insidious manner was most puzzling, and the prospects of combating a disease whose origin was so obscure were not encouraging

On the following day six cases suspicious of cholera were reported by Major Wales, from Fort William McKinley, which is located about seven miles up the Pasig River, from Manila For the week preceding August 23, about eight cases with profuse diarrhea and vomiting followed by collapse, had occurred at the fort The symptoms were the same as those usually found in rice poisoning which is so common among the United States soldiers in the islands, and in the absence of any cholera being reported anywhere in the Philippines, there was no particular reason for investigating the cases further In view of the fact, however, that the diagnosis of some of the later cases that occurred at the fort was bacteriologically confirmed, the earlier diagnoses of rice poisoning may not have been correct

The military medical men at once commenced active measures, and the comparatively few days during which the cholera persisted at the fort is another excellent example of how readily the disease can be eradicated when sanitary principles are intelligently applied

On August 25 an American woman residing at the Grand Hotel, in the walled city, was attacked, and died in a few hours On the same day an American residing on San Sebastian Street in a section of the city nearly two miles from the previous patient, was seized and died several hours afterward No connection could be traced between the two cases, nor could any history be obtained that the same articles of food which would be likely to convey the infection, had been eaten by these two victims

Cases in Manila occurred as follows

TABLE 1

August 23	2	September 1	17
August 24	1	September 2	12
August 25	3	September 3	27
August 26	8	September 4	18
August 27	10	September 5	12
August 28	6	September 6	10
August 29	9	September 7	8
August 30	5	September 8	7
August 31	7	September 9	4
		September 10	3

From this period the cases averaged about one a day until the end of the year, the total cases from Aug 23 to Dec 31, 1905, inclusive, being 255

The characteristic tendency of the outbreak continued during the early weeks of the scourge, viz No connection could be traced between the cases no two cases occurred in any one house, nor did two cases occur in any one group of houses A case almost invariably occurred in a section of the city far distant from a previous case and furthermore, it will be noted that the next case did not occur in the same section until the likely incubation period had expired Another especially noteworthy feature about the outbreak is that while the greatest number of cases occurred in the slum district this section of the city was not infected until during the latter part of the outbreak

At the commencement of the epidemic of 1902 cases in Manila were reported as follows

TABLE 2.

March 20	4	March 30	11
March 21	6	March 31	6
March 22	4	April 1	17
March 23	8	April 2	4
March 24	14	April 3	13
March 25	15	April 4	13
March 26	12	April 5	9
March 27	11	April 6	11
March 28	6	April 7	9
March 29	6		

By comparing this table with Table 1, it will be seen that at the end of the second week there had actually been more cases during the outbreak of 1905 than during that of 1902

In the meantime a telegram received August 26 from Talajala, province of Rizal, through the Army Medical Department contained the following information

Cases of a disease resembling cholera have developed in Talajala the first case being registered on the 21st, from that

date to the 25th, 16 cases and 12 deaths have been registered, the illness lasting from twelve to twenty four hours

On August 26 another telegram, received from the president of the Provincial Board of Health at Pasig, reported one suspicious case followed by death, in that town A representative of the Insular Board of Health, and another from the Bureau of Government Laboratories, proceeded at once by special launch to Pasig and Jalajala, for the purpose of investigating the cause of the outbreak in these places The result of this investigation did not shed any light on the origin of the infection Inquiry made by the inspectors only resulted in showing that at least one week prior to August 23 more deaths had occurred in Jalajala than usual, and that the victims had profuse diarrhea and died a few hours after the symptoms manifested themselves

An investigation made by Dr L T Hess, captain and assistant surgeon, United States Army, of the records on file at Muntinlupa and Biñan, situated in Rizal and Laguna provinces, respectively, and on the opposite shore of Lake Laguna from Jalajala, showed that death certificates had been filed during the week preceding August 23, for a number of cases (less than 12), in which the cause of death was given as "suspicious diarrhea"

The following table will show the order in which other towns in the provinces became infected and the number of cases up to Jan 1, 1906

TABLE 3

Town and Province	Date of first case.	To January 1 1906	
		No of Cases	No of Deaths
1 Jalajala Rizal	Aug 20	28	18
2 Guadalupe Rizal	Aug 24	1	1
3 Taguig Rizal	Aug 25	68	51
4 Pasig Rizal	Aug 27	59	47
5 Santolan, Rizal	Aug 28	1	1
6 San Pedro de Macati Rizal	Aug 28	4	4
7 Taytay Rizal	Aug 29	132	115
8 Gungua, Pampanga	Sept. 1	37	26
9 Indang Cavite.	Sept. 1	1	1
10 San Mateo Rizal	Sept. 2	16	12
11 Malabon Rizal	Sept. 2	53	50
12 Bulacan Bulacan	Sept 4	12	8
13 Sangley Point Cavite	Sept 5	1	1
14 Pasay Rizal	Sept. 6	1	1
15 San Felipe Neri, Rizal	Sept. 6	1	1
16 Pila Laguna.	Sept. 7	7	6
17 Cavite, Cavite	Sept. 7	22	20
18 Paranaque Rizal	Sept. 8	1	1
19 Santa Rosa, Laguna	Sept. 11	9	8
20 Mariquina, Rizal	Sept 13	4	3
21 Binangonan, Rizal	Sept 16	60	29
22 Morong Rizal	Sept. 16	186	116
23 Antipolo Rizal	Sept. 17	50	35
24 Meycauayan Bulacan	Sept 23	1	1
25 Los Banos Laguna	Oct 2	19	14
26 Imus Cavite.	Oct. 3	159	116
27 San Francisco de Malabon Cavite	Oct 5	12	11
28 Carmona Cavite	Oct 6	1	1
29 Caloocan Rizal	Oct. 13	4	2
30 Lucban Tayabas.	Oct. 12	4	4
31 San Pablo Laguna	Oct. 18	1	1
32. Binan Laguna.	Oct 16	111	92
33 Pagsanjan Laguna	Oct. 20	3	2
34 Paete Laguna	Oct. 21	3	0
35 Naic. Cavite	Oct. 21	48	45
36. Bay Laguna	Oct. 22	1	1
37 Santa Cruz Laguna	Oct 23	41	37
38 Majayjay Laguna	Oct 24	15	10
39 Cabuyao Laguna	Oct. 28	2	2
40 Calamba Laguna	Oct. 31	64	43
41 Hagonoy Bulacan	Nov 1	197	139
42 Noveleta Cavite	Nov 1	77	40
43 Macabebe Pampanga	Nov 6	9	7
44 Magdalena Laguna	Nov 6	4	3
45 Lilio Laguna	Nov 8	20	16
46 Naccarlang Laguna	Nov 9	1	1
47 Tanauan Batangas	Nov 20	10	6

The cases and deaths in the city of Manila from August 23 to December 31 were distributed by age as follows

TABLE 4

Age	Cases	Deaths	Mortality
Under 30 days	0	0	
1 to 2 years	3	3	100 0
2 to 5 years	20	20	100 0
5 to 10 years	14	14	100 0
10 to 15 years	14	11	78 6
15 to 20 years	23	17	73 9
20 to 25 years	33	28	84 8
25 to 30 years	33	28	84 8
30 to 35 years	42	38	90 2
35 to 40 years	24	19	79 2
40 to 45 years	18	17	94 4
45 to 50 years	8	8	100 0
50 to 55 years	11	11	100 0
55 to 60 years	1	1	100 0
60 to 65 years	6	6	100 0
65 to 70 years	0	0	
70 to 75 years	1	1	100 0
75 to 80 years	1	1	100 0
80 to 85 years	1	1	100 0
Unknown	2	2	100 0

The number of cases of cholera that occurred by race between Aug 23, 1905 and Dec 31, 1905, and the date of the last case, are shown in Table 5 Table 6 shows the classification of cases by occupation

TABLE 5

Race	Cases	Deaths	Mortality per cent	Ratio of 1 Case to	Date of Last Case
Americans	11	6	54 0	339	Oct. 10
Filipinos	220	200	90 9	862 6	Dec 31
Chinese	4	4	100 0	5307 5	Oct. 8
Foreigners	20	16	80 0	227	Nov 8

TABLE 6

Occupation	Filipinos		Americans		Japanese		Chinese		Foreign	
	M	F	M	F	M	F	M	F	M	F
Barber	2									
Blacksmith	1									
Boatman	1									
Buttonmaker		1								
Carpenter	4				1					
Cigarmaker	2	1								
Clerk	2		1							
Coachman	2									
Collector	1									
Cook	1									
Domestic		2								
Draughtsman.	1									
Dressmaker		5								
Electrician	1									
Fireman	1									
Fisherman	2				3					
Gardener							1			
Hotelkeeper				1						
Housekeeper		5								
Janitor	1									
Journalist	1									
Laborer	14		1		4		2			
Laundress		9								
Mason										
Merchant	1		1						1	
Messenger	1									
Milkman	1									
Painter	1									
Policeman	1									
Prisoner	29									
Religeuse		1								
Sailor	5		1						1	
Silversmith	1									
Soldier	1									
Stonecutter	1									
Student	4									
Tailor	1									
Teamster										
Tendera		3								
Trader							1		1	
Water vender	1									
Unknown	9	21			3					
Children	20	28	1							
Total	114	86	3	1	11		4		3	

From Table 5 it will be seen that in proportion to their number more foreigners (Jar [illegible]) contracted cholera than any

Americans ranked next, but had the lowest death rate, and that the least number occurred among the Chinese The mortality of 100 per cent among Chinese may be attributed to the fact of the very few cases that occurred, and that those patients who recovered probably escaped detection by the health authorities That no further cases occurred among Americans after October 10 was probably due to the fact that as soon as they believed the disease to be actually present, they observed the prophylactic measures against cholera more strictly

The high percentage of Americans and Europeans attacked may also be more apparent than real, because it is quite probable that all those persons of this race who were attacked promptly sought medical advice and thus were reported, while among the natives and Chinese, in all probability cases occurred in which the patient recovered, and thus were not reported

In Table 7 is given the death rate per thousand for Manila, for all diseases, for the years 1903 and 1904, in which no cholera was reported The death rate for the same months in 1905, during which period 250 deaths from cholera were reported, is also given

TABLE 7

	1903		1904		1905	
	Number of Deaths	Annual Death Rate per 1000	Number of Deaths	Annual Death Rate per 1000	Number of Deaths	Annual Death Rate per 1000
August	862	46 17	1032	55 28	841	45 03
September	1228	67 97	1064	58 89	1013	56 06
October	1217	65 10	1018	54 53	850	45 51
November	974	53 91	957	52 97	944	52 24
December	894	47 89	794	42 53	841	45 03
		281 13		284 20		243 87
Average		56 22		56 80		48 77

From the above table it will be seen that the death rate for the years in which no cholera was reported was actually higher by more than 8 per thousand than in 1905, when cholera was reported The death rate is of particular importance, in view of the fact that an increase in the general mortality has been almost universally accepted as being a strong factor in indicating that deaths from communicable diseases were occurring Many epidemiologists who have written on this subject in the past have laid especial stress on the fact that when a sudden increase in the death rate for a community takes place, it should be regarded with suspicion, and the possibility of a dangerous communicable disease being present should be considered

THE SOURCE OF THE INFECTION

It will now be interesting to consider whether or not the infection was introduced from without, and in this connection it will be important to ascertain in what other nearby countries cholera was present at the time it made its appearance in the Philippine Islands

Manila is in active communication, by direct steamship lines, with the following Oriental ports Yokohama Kobe, Nagasaki Moji, Shanghai, Amoy, Hong Kong, Saigon Singapore, Rangoon Calcutta, Madras and Bombay, and indirectly, with Sourabaya and few other Javanese and Bornean ports Examination of the official sanitary statistics received from the ports mentioned discloses the fact that cholera was present in an isolated manner in the country back of Kobe, Japan, in Calcutta and in Bombay In the case of the two last mentioned ports, the sailing time to Manila by the most direct steamers is at least nine or ten days from Calcutta, and at least fifteen days from Bombay The fact that the incubation period is only five days, that no sick were found on any of these vessels, and that, from laboratory experience, it has been ascertained the class of vegetables and other cargo which come from these ports will not serve as media for the growth of the cholera bacilli for a greater period than five days, shows that for practical purposes these two ports may be dismissed from further consideration At any rate, the only importations from India are rice, onions, potatoes, textiles, ivory goods and other articles not at all likely to convey cholera organisms

No cholera was reported in Hong Kong, and none was known to exist in Canton, but in view of the fact that the actual status of the public health in Canton is not well known at any time, that place can not be excluded with any degree of positiveness The time from Canton to Manila, by way of Hong Kong would be at least from four to five days, but in view of the fact that only onions, potatoes, garlic and such other vegetables as are necessarily forwarded in a dry state, were shipped from these ports, it is not likely that cholera organisms could have been introduced with them, furthermore, since Canton vegetables are used freely aboard vessels which entered the Philippines from Hong Kong, and since no sick were found on these vessels, it is reasonable to exclude that port from the list of places likely to have been the cause of the introduction of the infection

The records show that from Kobe a number of vegetables were shipped, but they consisted principally of onions and potatoes, and a very small amount of cabbage The vessels that arrived from that port for the month preceding the outbreak of cholera in Manila did not have any cases aboard which were in any way suspicious of cholera In view of the fact that cabbage is the only vegetable which could possibly have been the cause of the introduction of cholera, and since at least five days is consumed in the voyage, and more time must necessarily have elapsed before it could have been placed on the market, and since experiments made in the laboratory of the Public Health and Marine-Hospital Service show conclusively that cholera organism can not be kept alive on cabbage for longer than five days, this method of the introduction of the infection may also be excluded The only other articles which are open to suspicion, imported from Kobe, Japan, are classes of food peculiar to the Japanese, and which are not eaten by other nationalities Many of these consist of vegetables in a fermented state, which in itself precludes the probability of cholera organisms existing therein, and furthermore, since no Japanese persons are known to have been attacked in the city of Manila until the disease was present at least five days, and after more than 25 cases had occurred among other nationalities, it is not likely that the infection can be ascribed to Japanese food products

From the foregoing it will be observed that so far as the records show, at least it is not likely that the infection gained entrance into the Philippine Islands from without Of course, there is always the possibility that cholera organisms may have been present in the intestines of an incoming passenger, but in view of the fact that the first cases known to have occurred were in persons known to have been in the islands many weeks immediately previous, and also, that they were not per-

sons likely to ingest foreign food, this last contingency would also seem remote

FIGHTING THE EPIDEMIC

In mapping out a campaign for the suppression of the disease, the work was divided into four parts

1 Isolation of the sick in the cholera hospital, and the rigid disinfection of their houses and effects

2 The protection of the city water supply, including the closing of wells located in the city of Manila

3 Prohibition of the sale of foodstuffs likely to become contaminated, and the proper protection, with fly screens, of the remainder

4 The education of the public in the precautions to be observed in order to avoid the disease

The carrying into effect of the isolation of the sick, and their treatment at the cholera hospital, was so well organized as the result of the experience gained in the former epidemic that this particular feature worked very smoothly, but in other respects the work was attended with considerable difficulty on account of the strong antipathy of the Filipinos to be treated elsewhere than in their homes

The native daily papers took the matter up and drew a vivid pen picture of the mental agony that would be endured by the relatives and friends of those who should be unfortunate enough to be stricken with cholera, and separated from them by being compelled to go to the cholera hospital The direct effect of the publication of such articles was that many cases were concealed, and just so many infected centers remained undiscovered The newspaper attacks were borne patiently, and constant endeavors made to show prominent Filipinos and the representatives of the press the magnificent manner in which the cholera hospital was equipped, and how much the chances of recovery from an attack were increased by hospitalization, and the fact was particularly pointed out of the great injustice done to the patient by depriving him of these increased chances for recovery Fortunately, a number of well-known citizens recovered at the cholera hospital about this time, which had the effect of at least silencing the critics, after which the work of isolation was carried on with much less hindrance and with ever-increasing effectiveness

To the American press of Manila too much credit can not be given for the manner in which it pointed out the danger that existed in concealing cases

No attempt was made to quarantine "contacts," nor was any attempt made to institute a land quarantine at any place in the islands This was a radical departure from the manner in which, in 1902, the campaign against cholera was conducted The infection was followed from center to center, the sick were isolated, and every practicable measure was taken to destroy the infection and thus to prevent its spread It is believed that this method was of more value than an attempted quarantine would have been as the latter would necessarily have had to be too despotic to have been of any permanent value The policy was to educate rather than to antagonize and what has been lost in some respects has been more than compensated for in others

By comparing the disease during this epidemic with that of the previous one it will be seen that the disease actually spread more slowly this time than before. To quarantine effectually the infected area in and around Manila not to mention the provinces would have required from 30 000 to 50 000 armed men and unless this quarantine had been made effective it would have been useless The cost of maintaining such a quarantine, in the salaries for guards and delays and losses to business, would have been enormous

It may be contended that the infection this time was milder in character, and for that reason did not spread but when it is remembered that the mortality was over 90 per cent, and that nearly all the victims succumbed in a few hours after the first symptoms appeared and that almost without exception the disease spread rapidly unless prompt disinfection was done, it will be seen that this contention has very little basis in fact

The beneficial effect of not alarming the populace, and thereby causing a great emigration from the centers in which the disease appears, can scarcely be overestimated By the plan followed, cases of cholera, instead of being carried far and wide in every direction, were confined largely to Manila, where the patients could be promptly isolated and the necessary disinfection performed, the consequence of which, of course, was that there was little danger from the spread of infection in such cases

The one idea that was kept constantly in mind was to so arrange the inspection system that the disinfectors could reach the cases in the shortest possible time The disinfection was made as simple as possible, and strict instructions issued that nothing must be destroyed or damaged, with the exception of the prepared food which was found in the houses, the stools of the patients and the places where they were thrown and the clothes which they soiled were diligently sought for and thoroughly disinfected with a 1 to 1,000 solution of bichloride of mercury, or a 5 per cent solution of carbolic acid The floors and walls were thoroughly saturated with the same solution, by means of a pump

All containers in which water was stored, as, for instance, water coolers, earthen jars, filters, barrels, wells etc, were treated with potassium permangante "Contacts" were required to take an antiseptic bath The disinfecting carts were used in much the same way as the apparatus of a fire department. The horses were kept hitched up, night and day, and as soon as a case was reported, the disinfectors reached the infected house a few minutes later The fact that no second case occurred in any house shows most effectively how efficiently the disinfection was done.

PROTECTION OF WATER SUPPLIES

A few days after the outbreak of cholera in Manila a few isolated cases of the disease were carried to the water-shed from which Manila obtains its drinking water These cases probably came from Taytay, a small town in Rizal province, located near the water-shed The importance of properly guarding the water supply of a city of 219,000 inhabitants will be readily appreciated Arrangements were promptly made for sending an adequate patrol to the Mariquina Valley, to prevent the pollution of the water Through the courtesy of the Commanding General of the Philippines Division, four troops of the Eighth Cavalry were promptly ordered to the valley, and remained there until long after the time that the last case of cholera was reported The water-shed is inhabited by about 10 000 persons and from time immemorial it has been their custom to bathe and wash in the Mariquina River, from which the Manila water supply is drawn To deprive them suddenly, of this privilege produced great opposition among the people, and made it difficult for effective work to be done For that reason, to the American troops great credit is due on account of the great patience which they exer-

cised The fact that the river was not polluted, although many cases of cholera occurred immediately along its banks, shows most conclusively how effectively the troops carried out the duties to which they were assigned

As an additional protection, during the time that the cholera on the water-shed was at its height it was deemed advisable to place a sufficient amount of copper sulphate in the city reservoirs to make a solution of 1 to 2,000,000 Subsequent experiments made at the laboratory with the regular city water, however, showed that a solution of at least 1 to 50,000 would be required to kill cholera organisms with certainty in thirty minutes' time As this would be unsafe for drinking purposes for continual use, it is of course obvious that cholera organisms can not be successfully removed from the public water supply of Manila by the use of copper sulphate

In the city of Manila there still remain a great many wells which, ostensibly, are used only for the purpose of sprinkling streets, washing carriages and other uses, but the danger is always present that they will be used for drinking purposes, and for that reason an order was issued which directed the closing of all wells in the city of Manila

After the large city mains were protected, and the wells were closed, it could almost be said with certainty that no large epidemic could take place in the city of Manila, and this proved to be the case

PROHIBITION OF THE SALE OF FOODSTUFFS AND PROTECTION BY FLY SCREENS

For one who has never seen the local native markets, it will be difficult to understand the great variety and kinds of foodstuffs that are offered for sale, and the ideal culture media which they offer for cholera organisms Among them are snails, fish of various kinds, crabs and other shellfish, cooked vegetables, etc There are also many green vegetables which, of necessity, must be continually watered in ordered to keep them in a fresh condition The great amount of handling by prospective customers, which all the foods in the public markets receive, makes it clear that they are likely at any time to become contaminated by persons who are either in the incubation stage of cholera or have come in contact with infected material

The chewing of the betel nut has long been under suspicion as being perhaps the most common manner by which cholera is propagated and continued in the Philippine Islands The betel is prepared for chewing by extracting the kernel from the nut, which is from 5 to 8 centimeters long, with a diameter of 2 centimeters The outer cover of the nut is a thick husk, comparable to that of the green walnut or butternut of the United States The kernel, when extracted, is cut into discs, each of which is wrapped with a piece of moist green buyo leaf It is in this leaf that the danger is supposed to lurk

In order to keep the leaves in good condition, they are kept in an earthen pot and thoroughly sprinkled with water every few hours As new supplies of the leaves are received at the markets, the old water that accumulates in the bottoms of the vessels is not always replaced with fresh water Each prospective buyer of the buyo leaf usually fingers all the leaves that are found in the pot in order to find those which are most tender In this way the buyo leaves in a given vessel are probably handled by *different persons many times* each day before they are finally disposed of and if there is any cholera in the neighborhood it is quite easy to conceive how, sooner or later a person who has cholera organisms on his or her fingers, will come in contact with the buyo leaves To prevent the sale and use of the betel nut and this buyo leaf is probably one of the most difficult things which the Bureau of Health had to attempt Confirmed betel-nut chewers are almost as insistent on having their chewing material as the average opium habitué is in obtaining his supply of opium, and they will go to every possible trouble and risk to obtain it

Street peddling was entirely forbidden The sale of fruit that grows well above the ground, as, for instance, those fruits grown on trees, exemplified by bananas, cocoanuts, mangoes, etc, was not interfered with to any great extent. These fruits, fortunately, are not handled very much by prospective buyers, before being bought, and, therefore, are not likely to become contaminated Some of the cheaper articles, which are absolutely indispensable to the poorer classes, were permitted to be sold, provided the shopkeeper agreed to keep the product under fly screens, and to prevent intending purchasers from handling the same

With the aid of the police, these regulations were fairly well carried out, and perhaps aided considerably in preventing the spread of the disease

THE EDUCATION OF THE PUBLIC IN THE PRECAUTIONS TO BE OBSERVED IN ORDER TO EVADE THE DISEASE

Education of the public was probably the most important work that was done by the Bureau of Health, and the success in controlling the outbreak was no doubt largely due to the co-operation which was given

In order to place something practicable before the public, something which required very little expense, trouble or knowledge to carry out, the following rules were printed in the newspapers and then issued in the form of a handbill, in English, Spanish, Tagalog, Ilocano, Viscayan, and other native dialects

1 Boil all drinking water and place it while hot in covered vessels Do not dip up the water when needed, but pour it into drinking cups, otherwise cholera germs may get into the water from the hands

2 Do not touch drinking water or food with the hands unless they have just been washed in water that has been boiled

3 Eat only cooked food Avoid all fruits, raw vegetables, and raw fish Dried fish may be made safe by thoroughly heating Fruits may be made comparatively safe by dipping them a few seconds into boiling water

4 Flies may carry cholera germs on their feet from human excreta to food, therefore, to protect it from flies, cover all food immediately after it is cooked.

5 If cholera appears, build smudges under houses to drive flies away

6 Boil all water used for diluting milk

7 Cook all meats and fish thoroughly so as to heat the same throughout

8 Keep kitchen and table dishes thoroughly clean and scald them before using

9 Keep the place in which you live, the ground under the house, and everything pertaining to it, clean

10 Outhouses, closets, and vaults can be made safe by putting in lime or carbolic acid When this can not be done dejecta must be buried or thoroughly covered with earth

11 Isolate all the sick. It is recommended that a house in each barrio be set aside for this purpose.

12 All the dead should be embedded in lime and buried three feet under the surface

13 Filth or vomit and the dejecta of the sick should be promptly cleaned up with boiling-water and buried.

14 Clothes and bedding used by sick persons must be either burned or boiled Do not wash any clothes near wells or springs, nor permit surface water to run into any well or spring

15 Municipal presidents and municipal councilors should enact these rules as ordinances and see that they are enforced

16 All school children are requested to inform their parents of these rules, which, if observed, will prevent great loss of life

The Bureau of Education sent these circulars to every school teacher in the islands, with instructions that the rules should be taught to all pupils so that they could recite them, and then the pupils were requested to repeat them to their parents The Archbishop of the Catholic Church of the Philippine Islands sent the circulars to every priest, with instructions that they should explain their contents to their parishioners The Aglipay Church and other denominations did the same Very large flaring red cardboard posters, with the rules printed in several languages, were posted in the postoffice, municipal buildings, and other public places throughout the islands Later, a more advanced cholera circular was prepared for the use of teachers The information contained in these later circulars enabled many teachers to cope successfully with the disease when it made its appearance in the small towns at which they were at work

Many thousands of Filipinos soon learned that they could easily avoid contracting the disease How different was this picture from that presented in 1902, when only *fatalistic indifference* was shown, and the only measures taken by the natives themselves consisted in nightly religious processions With the exception of a few instances, in districts in which dense ignorance prevails, *these latter are scarcely ever encountered* The number of persons who boiled their drinking water was astonishing

CONCLUSIONS

1 From the evidence obtainable at this time, it is impossible to state whether the cholera was reintroduced into the Philippines, or remained here in some latent form for the year and a half during which no cases were detected

2 While there is no evidence to show that the disease spreads by other means than that of enteric fever, yet the rapidity with which it makes its appearance in many widely separated places puts it in an entirely different class so far as combating it successfully is concerned

3 Maritime quarantine can practically insure the prevention of its spread by sea

4 It is practically impossible to make a land quarantine effective hence it is useless to engender the opposition with which it is usually met, and the time and money required by such a quarantine, will yield much better results when put to the education of the public in the manner in which the disease spreads

5 The education of the public is a much more effective measure in its suppression than methods requiring force in their application

6 In order finally, to make serious outbreaks of cholera in the Philippines impossible it will be necessary to replace the present insanitary water supplies with artesian wells or other sources from which infection by surface drainage can be avoided or to correct it by filters or other means where it does occur

Strychnin in Shock.—Dr Graeme H Hammond New York states that whatever the effect of strychnin in surgical shock it is absolutely injurious in psychic shock

CEREBRAL SYPHILIS IN CHILDREN *

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In part, this paper is based on the study of somewhat over 100 cases of undoubted syphilitic cerebral disease in children from the literature A large number of other cases, undoubtedly of similar character, have been excluded merely because unequivocal evidence of syphilitic infection was wanting, or postmortem examination had not been made

The paper is really a consideration of hereditary cerebral syphilis but it is thought best to employ the broader title in deference to the opinion of certain well-known observers who believe that many cases of syphilis developing late in childhood are instances of acquired and not of congenital infection

A study of a large number of cases from the literature does not indicate that there is much ground for this belief Certainly, the great majority of the cases are undoubted instances of inherited disease There is no reason, however, why cerebral symptoms of presumptive specific character, appearing late in childhood, may not in fact be the so called tertiary" phenomena of a specific infection acquired in earlier years So far as the symptoms and the clinical interest of the affection are concerned, it makes but little difference when the infection occurred It is *with the fact of the frequency of* cerebral syphilis in childhood and with the interesting clinical and pathologic manifestations of the disease that we have to do rather than with the question of the manner of infection

It is not possible to obtain an adequate conception of the relative frequency of this affection in the period of childhood by judgment based on the space devoted to the subject in the text-books It is a field of research as yet almost unexplored in special pediatric literature but one which as time goes on will be recognized as of the greatest interest and of far-reaching importance

That the subject is deserving of a special chapter in pediatrics is evinced by the large number of instances of the affection to be found in the literature, and by its unquestionable relation to other and very common affections in childhood not usually regarded as of specific nature

When we consider the frequency of these other conditions in childhood and the probable specific character of many of them the entire subject assumes a position of the foremost importance in the study of disease in children and may justify a brief study of the subject and the placing on record of a grouped and condensed summary of some of the cases

The words of Fournier,[1] in his treatise page 122 may well be repeated as preface to any consideration of the subject

Avec les affections du système nerveux nous allons aborder un chapitre des plus importants de notre programme et j'ajouterai des moins connu

In the consideration of this affection we must study first the clinical phenomena in each case and the probable character of the morbid changes in the nervous structure responsible for the ephemeral

There are three pathologic conditions in which singly or in combination may be responsible for

* Read in the Section on Diseases of Children at the Fifty-second Annual Session of the Medical Association at the Hot Springs, June 18, 1901

1 Fournier Syphilis Héréditaire Tardive 1886

the symptoms of cerebral syphilis They are, in the order of apparent frequency of occurrence Meningitis (usually leptomeningitis), arteritis (usually endarteritis), syphilomata (usually of meningeal origin) To these conditions all other changes are probably secondary

What are the grounds on which, in any given case with nervous manifestations, we base our assumption that those phenomena are of specific origin? In themselves alone the symptoms, considered individually, and only from the standpoint of the phenomenon at any one time, do not present any characteristics that can be regarded as specific, for similar symptoms may be produced by diverse etiologic causes It is only when we consider the phenomena collectively, the character of their onset and progress, and their relation with one another, that any special peculiarity is apparent

When produced by syphilitic lesions of the central nervous structure, these phenomena present the following characteristics First They are multiform, having often no apparent relation to one another, associated together in an apparently random manner, often rendering their explanation, on the basis of any single lesion, impossible Second The onset of the phenomena is as a rule subacute, with the occasional occurrence of individual symptoms of very acute character and severe degree Third These latter phenomena are characterized by their tendency to disappear in the most unexpected manner, after a very brief duration, and by their equally striking and practically certain recurrence in the same or in some other locality, with the eventual persistence, after several such recurrences, of peripheral evidence of a destructive and permanent central lesion Fourth. The striking rapidity with which some of the symptoms yield to specific treatment, and the equally remarkable manner in which other phenomena persist or pursue their course without the slightest regard to energetic therapeutic measures, or even make their appearance while such treatment is in force

The phenomena are manifold, varying from time to time in character and degree, but at some one time during the course of the affection some one class of symptoms render themselves conspicuous by special predominance, occupying the foreground of a clinical picture whose background is the multiform symptom-complex to which reference has been made. Thus, motor phenomena may dominate the scene epileptiform convulsions, general or unilateral, monospasms may occur, tremors, involuntary irregular movements without loss of consciousness, motor aphasias, paralytic conditions of any degree of severity or extent

The ocular palsies, so frequent and conspicuous, belong to the instances in which the involvement of the cranial nerves is a prominent feature of the case

Sensory phenomena, neuralgic pain, numbness, anesthesia and various parasthesic phenomena may prevail for a considerable time, especially in the early stages of the disease while the background of other symptoms is still indefinite and vague In other cases the psychical features, changes in character, irritability, apathy, depression impairment of memory, diminution of mental capacity dementia, and very rarely mania, may either usher in or close the scene, or remain throughout the essentially predominant manifestation of the central process

It is by careful consideration of the nature of the onset progress and duration of the predominant phenomena that we are enabled to draw some inference as to the probable pathologic type with which we have to deal in any given case The subacute and often vague character of some of the early manifestations has led to their classification as prodromal or premonitory symptoms Such a distinction is artificial, although in some respects convenient These phenomena are as much a part of the symptom-complex as the later manifestations, and are, in their degree of vagueness or distinctness, no accurate index of the severity or extent of the morbid process at the time when they appear Moreover, the premonitory symptoms of one case may be later developments in another instance

It is not so much the initial phenomena themselves as it is the manner of their onset, and especially their course, that gives them a premonitory character These early symptoms are characterized often by the insidiousness of their onset, frequently by their transient character and erratic course Thus, following change of character and weakening of intellectual power, so insidious and slight as to be often unnoticed by the parents, and only remembered in the light of subsequent events, the child suddenly loses its speech, which, however, may last but a few moments or continue for days, complete restoration of the function ensues, only to be followed later on by a sudden loss of consciousness, with or without convulsive movements of general or local character This may disappear entirely or the child may be left with partial paralysis of some part of the body In another case in which for many weeks the only complaint has been of dull, diffused headache, with occasional attacks of vertigo, there develops, either suddenly or more slowly, a hemiplegia, this may disappear in a few days in the most unexpected manner, leaving no trace of muscular weakness, but appears again later, this time perhaps in the other half of the body Or a child may show an unnatural tendency to sleep with an occasional complaint of nocturnal headache continuing for weeks or months, when finally the sudden advent of epileptiform convulsions indicates the cerebral nature of the condition, or gradual diminution of visual power incites the parent to seek medical advice and choroiditis or optic atrophy is found Or, in another such case, paralysis of the ocular muscles may suddenly appear Thus the features of nearly any period of the affection may appear early in its course, but are then usually of fleeting nature and erratic course

Headache is frequently a very early symptom in childhood, as in adult life, but differs somewhat from the adult type in that it is often not well defined, more diffused in character and does not appear to reach the intense severity of the cephalalgia of later life Insomnia, so common and so obstinate in adult life, is far less common in childhood, except in cases in which it depends on the nocturnal exacerbations of the headache It may indeed be said to be, in children, one of the rarest of the symptoms so prominent a feature of cerebral syphilis in adults

Of all the early symptoms of the affection in childhood, changes in disposition and in the intellect are perhaps the most common initial manifestations Such alteration in character or intellect does not, however, always appear in the history we obtain from the parents of the child, unless they are very observant or the alteration very marked

Early in the course of the disease in childhood may appear headache, brief sensory phenomena, oculomotor disturbances and fleeting motor palsies, especially transient difficulties with speech and convulsive attacks While these symptoms may occur without premonition, and in the majority of cases seem to do so, more careful scrutiny of the child's life would in many instances re-

veal earlier premonitory evidence in the shape of insidious alteration in the psychical nature of the child This change in the mental state of the child may be so slight as to consist merely in a retardation of the normal mental advance, or it may be so pronounced as to include an infinite variety of psychical phenomena, unusual irritability, causeless fits of grief or anger, moods of depression or excitement, bizarre ideas and hallucinations, apathy, loss of desire to play or to associate with its former companions, diminished interest in previously enjoyed occupations, impairment of memory, diminished mental capacity and ability to reason

It is possible for a majority of these phenomena to make their appearance before the advent of motor or sensory disturbances Usually, however, before this background of mental disintegration is fully unrolled, individual symptoms of more definite character appear in the foreground There is another class of initial phenomena that may co-exist with, or may occur in place of the psychical symptoms These phenomena are considered by Fournier[1] (page 471) as of the congestive order, but, as it seems to me, may more accurately be termed "circulatory disorders" The most common of these disturbances in children is vertigo Of frequent occurrence also are brief interference with the function of speech, fleeting disturbances of vision and sudden attacks of syncope Somewhat less frequent, perhaps because more difficult to detect in childhood, are brief periods of mental confusion or sudden lapses of memory Tinnitus aurium may also be present

Sooner or later after the appearance of the initial phenomena appear symptoms of a more positive type inequality and fixation of the pupils, facial palsy, hemiplegic attacks or epileptiform convulsions These symptoms, especially the epileptiform and the hemiplegic attacks, may be, in the little child, previous to the third or fourth year, the first apparent indication of the cerebral disease

The earliest possible recognition of the true nature of the initial symptoms of this affection is imperative, for on the early diagnosis and the immediate institution of specific treatment depends the welfare of the child If we can not obtain from the parents information of specific infection in themselves or symptoms of infection in the early history of their child, we must endeavor to find on the body of the child itself some evidence of previous disease, or, failing in this seek for such evidence in the other children of the family, in the shape of recent or old traces of syphilitic lesions If these are not found, careful scrutiny of the family history may by its revelation of numerous unexplained miscarriages and stillbirths, or the existence of excessive infant mortality, from convulsions or marasmus, give strong presumptive evidence of the probable specific nature of the case In every such case the therapeutic test should be applied for the benefit that may result is incalculable and the harm nil

In not a few instances nothing in the history or examination of the patient or the family will be found to enlighten us in our doubt but suddenly an interstitial keratitis appears on the scene and yields the clue for which we have vainly sought Or keratitis may occur in one of the brothers or sisters or a chance ophthalmoscopic examination may reveal in one of them or in the patient evidence of choroiditis reminding us that in searching for specific stigmata in the shape of deformities of the teeth and nose scars about the mouth or in the throat impairment of hearing etc the fundus as well as the cornea of the eye should be invariably examined, in the other children as well as in the patient

The prognosis depends, first, on the early recognition of the nature of the affection, second, on the probable pathologic type, as far as can be determined by the clinical signs, third on the period in the life of the child at which the process begins

Determination of the type of morbid change in a given case is not always easy or possible, but certain inferences may be drawn from the clinical symptoms Those instances in which occur intense headache cranial nerve palsies, excessive reaction to sensory impressions especially hearing and sight, dulness or torpor insomnia or an unnatural tendency to sleep, and convulsive attacks and psychical disorders, especially when accompanied by a choroiditis, are indicative of a meningitis When the cranial nerve palsies are an early or a predominant feature, a meningitis commencing or concentrated at the base is probable Convulsive attacks and psychical irritability or depression, dulness or insomnia suggest the cortex as the seat of the greater meningeal involvement

Those cases in which vertiginous attacks, sudden losses of consciousness or brief mental confusion, transient disturbances of speech and paralytic affections of short duration or eccentric type prevail, are instances in which arterial change is probably the predominant morbid process

Certain features are common, however, to both the meningeal and the arterial form, and this is especially true of the mental symptoms, changes in disposition, irritability or apathy, progressive deterioration of mental power, paralytic conditions and convulsive attacks They may result, in the former case, from secondary changes in the gray matter induced by a chronic meningitis or from a specific meningo-encephalitis with subsequent atrophy of the hemispheres or cyst formation, or they may be produced by atrophy, sclerosis or softening in the gray and white matter, secondary to arterial disease with its occlusion of the arteries and consequent impairment of nutrition In many cases the two conditions are combined, and it is not then possible always to determine which morbid process is responsible for those individual phenomena which may be produced by either

Tumor formation, in the strict sense of the word usually gives rise to focal symptoms depending for their nature on the situation of the growth The gummatous growth of specific cerebral disease however is more commonly a diffuse gummatous infiltration of the meninges, its symptoms being consequently those of meningitis, and especially meningitis at the base with resultant cranial nerve disturbance

The prognosis depends to a considerable extent on the pathologic type Purely gummatous lesions yield readily to specific treatment. Meningeal processes if not of too long duration and taken at a time previous to the occurrence of secondary atrophy and sclerosis in the gray matter also possess a favorable prognosis If destructive involvement of the hemispheres has already occurred, specific treatment may check the advance of the meningo-encephalitic process but the destroyed areas remain with atrophy sclerosis and softening and adhesions between the meninges and brain

Of all the forms of syphilitic cerebral disease the arterial lesions present the most unfavorable prognosis While some cases respond to treatment others not only do not yield but even while treatment is in force may present an increase in clinical phenomena due to or

terial disturbance Hemorrhage is very rare in children with specific cerebral arterial disease Occlusion from thickening of wall or thrombosis is the rule

Finally the prognosis depends greatly on the time when the cerebral disease commences If it begins at a period of childhood when reasonably reliable subjective complaint is possible, or when the mental evolution has reached a degree at which early changes in disposition and insidious weakening of the intellect are likely to be conspicuous, earlier recognition, and therefore more effective treatment, will result

Syphilitic lesions in the brain have been found immediately after birth, or so soon afterward that they furnish conclusive evidence that it is possible for the involvement of the cerebral nervous structure to antedate birth

CASE REPORTS

CASE 1 —Still born syphilitic child[2]

Extreme pachymeningitis and leptomeningitis of base of brain and upper posterior portion of cord, with adhesions between the membranes and extreme fibrous tissue proliferation in the pia, invading and involving the white and gray matter of the cord Syphilitic arteritis of the basilar and both vertebral arteries Gummatous infiltration in bones liver and intestines

CASE 2 —Death ½ hour after birth Mother syphilitic[3]

Inflammation and adhesions of the meninges and increased fluid in lateral ventricles Gummata in both lungs Adhesions of dura to skull with necrosis of inner table

CASE 3 —Death 20 hours after birth Mother syphilitic[3]

Inflammation and adhesions of the meninges with fibrinous exudate along the vessels Adhesions of dura to bone with necrosis of inner table

CASE 4 —Death 5 days after birth Child syphilitic[3]

Multiple foci of softening throughout the cortex. Proliferation of neuroglia Diffuse gummatous leptomeningitis In the cord, diffuse pachymeningitis and leptomeningitis with adhesions, and of fibrous character, of lighter grade and without involvement of the cord itself Gummata in the suprarenal glands Specific osteochondritis of the femur, tibia and vertebræ Diffuse bronchopneumonia and follicular enteritis

CASE 5 —Death 10 days after birth Child syphilitic[4]

Meninges normal Extreme thickening of the basal arteries with great reduction of the lumen Endarteritis obliterans Syphilitic pemphigus, hepatitis, and amyloid spleen

CASE 6 —Death 6 weeks after birth Child syphilitic.[5]

Diminution in size and number, deformity of contour and changes in protoplasm (degeneration and atrophy) of ganglion cells of gray matter of the cord with proliferation of the neuroglia Central canal filled with transparent mass, about which small round cells are massed 5 to 6 rows deep

CASE 7 —Death 6 weeks after birth Child syphilitic.[6]

Atrophy of cells in gray matter of the posterior and lateral portions of anterior horns and in the column of Clarke Circumscribed homogeneous foci in the entire extent of dorsal region and about the vessels of the anterior commissure

CASE 8 —Boy 23 weeks old Illegitimate[6]

Coryza and specific eruption at birth Fourteen weeks later head began to enlarge, reaching extreme size Seventeenth week, convulsions of brief duration, involving mainly the eyes Twenty third week death Pachymeningitis hemorrhagica

CASE 9 —Death 5 months after birth Child syphilitic.[7]

Beginning affection of vessels of cord

These cases and those immediately following show how very early the central nervous system may become the seat of syphilitic disease In such early instances it may be impossible to detect the brain involvement unless the process is clinically indicated by gross symptoms such as repeated convulsions or pronounced paralysis

CASE 10 —*Girl, 10 months* Father syphilitic[8]

At age of 1 month snuffles, no rash Up to age of 4 months eleven convulsions of epileptiform character, then extreme emaciation and ulcers on nates, both conditions yielding to mercuric inunctions Seventh month disseminated choroiditis was discovered Tenth month death from marasmus, without other nervous symptoms

Postmortem —Scattered adhesions between the dura and the pia arachnoid Sylvian fissures glued together by old exudate At the base near the optic commissure a patch of greenish lymph In many places on the vertex and under surface of temporosphenoidal lobes the pia is thick and fibrous On upper surface of left parietal lobe a small patch of calcification Pia especially cloudy and thickened along the course of the vessels, and growths of connective tissue septa extended from the pia into the brain Vessels of the circle of Willis normal, but the arteries of the pia showed microscopically a high degree of arteritis, involving chiefly the inner and middle coats, and in places leading to complete occlusion Few areas of superficial softening in the cortex

This case illustrates remarkably the considerable degree to which the cerebral or, more properly, the meningeal process may attain in the early months of life, with comparatively slight clinical evidence of the same It is well termed a case of "chronic smouldering disease"

CASE 11 —Boy, 15 months Child syphilitic[8]

Coryza from birth No history of rash Two or three weeks after birth had sore nates lasting eight months Extreme emaciation Double coarse inconstant nystagmus, with tendency to deviation of axes to left. Pupils equal and of moderate size Fundus negative Double facial paresis, involving also upper branches more marked on left, and chiefly evident on movement F reaction diminished on both sides, especially the left G reaction increased on both sides, especially the left Frequent fine tremors of facial muscles about the corner of the mouth and of the orbicularis palpebrarum on the right side and to a less extent on the left side as well Death from exhaustion at 15 months

Postmortem —Some opacity of the pia at the base Both third cranial nerves at superficial origin swollen to conical tumors, and also swelling of the fourth, fifth, sixth, seventh and eighth pairs as well Microscopic examination showed almost complete atrophy of axis cylinders, abundant infiltration of new cells with fine stroma The new growth was especially abundant in the funiculi but also in the interfunicular areolar tissue The basilar and all the arteries of the circle of Willis were extensively diseased, appearing white, opaque and semi-cartilaginous. Thickening continuous along entire course but no nodules and no calcification On section the lumen was greatly narrowed, in places eccentric in outline, in many places nearly completely obliterated Microscopic examination of the middle cerebral artery showed the typical changes described by Heubner Invasion of all the coats by a cellular growth, with concentration of the process in the intima, although in places the muscular layer itself was destroyed

This case is unique and remarkable on account of the very unusual gummatous infiltration of the cranial nerves, of perfectly symmetrical character, the extreme affection of the arteries, with the practical absence of *meningitis* *It is a very rare condition in childhood* This child during life had "odd" attacks of laryngeal spasm and gasping, becoming "blue in the face," which

2 Jürgens Ueber Syphilis des Rückenmarkes und seiner Häute Charité Annalen 1883 p 729

3 Howitz Reference in Behrend's Syphilodologie ii p 60

4 Marchiafava Sulla sifilide delle cerebrali studi clinici ed istologici Atti dell accademia med di Roma 1877 iii, No 2 p 101

5 Tarisch Ueber den Rückenmarksbefund in 7 Fällen von Syphilis Arch für Dermat u Syph 1881 p 621

6 Heubner Pachymeningitis hemorrhagica bei hereditärer Syphilis Virchow's Archiv 1881 lxxxiv p 267

7 Kahler and Pick Befunde im Rückenmarke eines syphilitischen Kindes Prager Vierteljahrschr 1879 ii p 1

8 Barlow 'Meningitis Arteritis and Choroiditis in a Child the Subject of Congenital Syphilis Trans Path Soc. London 1877 xxviii p. 287 also Medical Examiner 1877 p 68 and Gummata on Cranial Nerves Disease of Cerebral Arteries in a Case of Congenital Syphilis Trans Path Soc. loc cit, p 291

Barlow thought might be due to some affection of the vagus I think it was probably tetany, which at this time (1877) was not generally recognized The child had had much gastrointestinal trouble, vomiting, etc

CASE 12 —Child born with specific eruption[9] Age not stated Mother syphilitic. Eruption cleared by inunctions Later, periosteal gumma of jaw, some weeks later, death with apparent meningeal symptoms, in coma.

Postmortem —Specific arteritis of vessels of circle of Willis Foci of softening in the cerebrum and cerebellum[9]

CASE 13 —Boy, 2 years[9]

Abnormal over development of skull with mental changes curious alternation between brightness and dulness talking often constantly to himself Death from diphtheria and bronchopneumonia at 2 years

Postmortem —Gummatous pachymeningitis and leptomeningitis with adhesions Numerous gummata in cortex of considerable size and a very small one in cord Chronic internal hydrocephalus Syphilitic periostitis of tibia and phalanges Gumma in left kidney Fibrous adhesive perihepatitis and perisplenitis

This case shows the relatively rare condition in children of circumscribed multiple gummata of the brain They were in the cortex, however, and therefore undoubtedly of meningeal origin

As we come to the consideration of the affection in childhood proper, that is over 2 years of age, the clinical phenomena become more prominent and the cases assume greater clinical interest Frequent in its occurrence in children is the involvement of the cranial nerves, and this occurs as the sole manifestation of the cerebral lesion, or as the predominant feature, or only as an incidental precursor or accompaniment of other phenomena It will be noticed in many of the cases that follow, but in the series immediately following it will be seen to exist as the most striking or the sole feature of the affection

CASE 14 —Child, 2 years[10]

Specific papular eruption over entire body Loss of sight in right eye, specific iritis On the left ptosis, divergent strabismus, dilated fixed pupil Specific treatment caused disappearance of rash but no change in the cranial nerve condition Death from marasmus

Postmortem —Right optic atrophy Left oculomotor atrophy with gummatous infiltration Focus of softening in the left lenticular nucleus, and in the right cerebral hemisphere

CASE 15 —Girl, 15 months Parents both syphilitic.[11]

Following specific eruption shortly after birth, paralysis of motor oculi and right facial occurred at tenth month, ptosis on right and dilatation of left pupil, with hemiplegic symptoms when 14 months old, and death at 15 months, following 12 days of epileptiform convulsions

Postmortem —Leptomeningitis Diffuse thickening of basal arteries, the basilar and vertebrals nearly obliterated and thrombosis of the closed vessels above In the cerebral arteries were extreme changes destruction of the media, thickening and small cell infiltration of the adventitia and thickening of the intima Minute foci of softening were in the gray and white matter of the cerebrum Right facial nerve showed small cell infiltration of the neurilemma Ventricles were normal Numerous macular like foci of granulation tissue were in the meninges with hyperemic vessels Carotids were thickened

CASE 16 —Girl 9 years Child syphilitic[12]

Sudden onset of signs of cerebral pressure Later transient squint, three attacks of unconsciousness, diplopia nearly complete blindness and deafness Eight months after onset there was no wink reflex and beginning optic atrophy Pupils dilated, equal, with hardly any reaction to light Deaf on right except to very loud sounds and complete absence of hearing on the left Taste for sweet gone Alternating rapid and slow pulse

In further course there were nocturnal exacerbation of headache, weakness of lower extremities, and three months later extremely painful stiffness of the neck for 14 days and for 3 months monospasms, hemispasms, and general epileptiform convulsions occurred During latter part of their course the knee jerks were affected being absent on right weakened on left Then ensued attacks of intense pain, especially in the legs, then spastic signs first as attacks of perfectly symmetrical paraspasm, finally permanent contractions Legs more affected than the arms Vagus paralysis bronchopneumonia and death at 9 years

Postmortem —Non ossified bulging cranial sutures, internal hydrocephalus some ependymitis closure of fourth ventricle by tumor of inferior vermiform process of cerebellum of meningeal origin, and adherent to floor of fourth ventricle circumscribed destruction in region of calamus scriptorius and the ala cinerea Chronic meningitis at the base involving the cranial nerves and chronic diffuse meningo-encephalitis over cerebellum Extreme chronic meningomyelitis in the cord, with vascular changes Arteries of base unchanged

This case is remarkable in that the intelligence was unimpaired to the end It was a basal cerebellar and spinal process essentially

CASE 17 —Child 12 years Father syphilitic[13]

Violent pain in left temple and eyeball, with protrusion External squint, ptosis diplopia Complete disappearance with specific treatment in two months

CASE 18 —Boy, 2¼ years[14]

Syphilitic skin and pharyngeal lesions cleared with mercury Two months later sudden attack of aphasia, paralysis right lower facial branches and right arm Under potassium iodid all symptoms disappeared in 14 days

CASE 19 —Girl, 12 years Parents syphilitic[15]

Skin lesions in early life Periodical headaches for years Suddenly following 12 days after fever and vomiting tenderness of cervical muscles, and intense frontal headache, right ptosis, paralysis of palate and paresis of right arm appeared with intense vertigo while in upright sitting position and double nystagmus Pupils negative Two or three days later abducens paralysis and diminished sensibility on right thigh, pains in right arm and leg Complete left facial paralysis and anesthesia in territory of left fifth, with trophic disturbance on skin Intercurrent keratitis and iritis Specific treatment produced marked but not complete improvement in 6 months

CASE 20 —Girl 6 years[16]

Diffuse maculopapular eruption over body Chill fever delirium, coma, retraction of head Kernig's sign temperature 104 8, pulse, 140, leucocytes, 25 000 cerebrospinal fluid sterile Extension of eruption to face and extremities Some clearing of sensorium with irritability and headache Six days after onset left facial paresis of all branches Interstitial keratitis Fundi normal Specific treatment caused improvement of all symptoms except slight remaining facial paresis and internal ophthalmoplegia of left eye

CASE 21 —Girl 8 years Parents syphilitic[17]

When five weeks old lost power in right arm for five weeks Eighth week papular eruption on back buttocks and around genitals and arms Cried much at night and buried head in pillow during infancy Third year double keratitis Fifth

9 Declercq and Masson Contribution a l'Etude de la Syphilis cérébrale chez l'Enfant Annal de dermat et de syph 1885 p 708
10 Engelstedt Die Constitutionelle Syphilis German. By Uterhart Würzburg 1861 p 148
11 Chiari Hochgradige Endarteritis luëtica (Heubner) an den Hirnarterien eines 15 monatlichen Mädchens bei sicher konstatirter Lues hereditaria Wien med Wochschr 1881 pp 475 and 507
12 Büttiger Beitr zur Lehre von den luetischen Rückenmarks Krankheiten Arch für Psychiatrie 1894 p 640
13 Calcowski "Contributions a l'Etude des Tumeurs Syphilitiques de l'Orbite Recueil d'Ophthalmologie 1879 T I p 454
14 Szontagh F von Diseases of the Central Nervous Syst in Congenital Syphilis Orvosi Hetilap Budapest 1885 p 142 also Trans Pester med chir Presse
15 Thiersch Zur Casuistik der Wochschr 1887 p 447
16 Butler Willi m J Cerebral x. pp 989 to 992.
17 Maclenzie Contr tion to Ills New York Med Jour 1884

year double ptosis with intense occipital headache, all dis appearing in a month on unknown treatment. Then right internal squint and deafness in right ear with slight discharge, followed by a specific inflammation of the throat of great severity

CASE 22.—Girl, 5 years. Child syphilitic[18]

Was treated soon after birth when signs appeared. Fifth year sudden complete oculomotor paralysis. For several months had had headache and vomiting. Considerable im provement under specific treatment.

CASE 23.—Girl, 14 years. Father syphilitic seven years before her birth[19]

Well marked congenital syphilis. Paralysis of right third and sixth and anesthesia in the distribution of the ophthalmic and superior maxillary division of the fifth. Corneal opacity and old iritis on the right.

Hutchinson remarked, at the time this case was shown, that it was "a very unusual case." In view of the other cases here mentioned, it can not be so considered at the present time.

One of the most frequent manifestations of specific cerebral disease, in the earlier years of childhood, is the occurrence of convulsive attacks. They may usher in, accompany, or follow other phenomena, they may give place to these phenomena eventually, or they may remain throughout the predominant or the sole manifestation of the central lesion.

In Case 10 convulsions are the first and only clinical evidence of what proved to be marked cerebral involvement. In Case 15 they close the scene of brief but well-marked clinical signs. They may be of any form and every degree of severity and extent. They may or may not be characterized by loss of consciousness. They are frequently of such a character that no clinical differentiation from epilepsy, either petit mal or grand mal or the Jacksonian type is possible. So typical are many of these cases that no other classification is justified and one is forced to the conclusion that they differ from any other order of epilepsy, only in their etiology and in their manner of response to therapeutic agents. Cases of epilepsy of specific origin may commence in early infancy as the result of damage done to the brain from an earlier, sometimes perhaps intrauterine, specific lesion, or they may begin at any other period, even late in childhood, from the same cause. In these cases the epilepsy may not be accompanied by any other evidence of the central damage, or it may be associated with idiocy or feebleness of mind, or with impairment of motor power of greater or less extent, all of these conditions being the secondary result of damage done to the brain, and analogous to similar conditions brought about by other etiologic factors, such as the epilepsy, enfeeblement of mind, or palsy, secondary to lesions of the brain produced by trauma, at birth or otherwise, meningitis, or by the toxic injury or encephalitic processes brought about by infectious diseases, other than syphilis, or to lesions induced by arterial conditions, other than specific. Since pathologic examination of many cases in which the syphilitic factor is known shows lesions similar to those of which the etiology is obscure, it is not unreasonable to assume that some of the latter may have been originally of specific origin. These secondary conditions from old lesions may be of constant or fixed type, but the convulsive attacks, palsies, and mental phenomena that are the direct primary result of active, progressive syphilitic disease are not fixed or constant, but are characterized by their variability of form and duration, enduring for a time, then giving place to other phenomena, eventually perhaps returning to assume permanent form.

CASE 24.—Boy, 9 years[20]

For six months in infancy had convulsions, then they ceased but returned in his seventh year without evident cause and continued several times each day with occasional day or two of freedom until his ninth year, with no relief from bromids. Then it was discovered that his mother had a specific ulcer on her foot and the father was found to be badly affected, nodes on tibia, severe nocturnal headache and ptosis on the left. Potassium iodid gave the child quick relief and four months later there had been no return of the epileptiform seizures.

CASE 25.—Boy 14 years[21]

When three months old had general eruption over body for which he was treated nine months. In his fourth year had a convulsion lasting six hours, followed by right hemiplegia and loss of speech. Six months later another convulsion, becoming of weekly occurrence and only on right side, until recently, near his fourteenth year, when they changed to the other side. In his eleventh year double keratitis appeared. Upper central incisors typically specific. Mind enfeebled.

CASE 26.—Girl, 12 years[22]

Father died of cerebral syphilis. Eight weeks before first seen, the child was suddenly taken with convulsions which recurred uninfluenced by treatment. Teeth called typical by Hutchinson. Cornea cloudy, bridge of nose sunken.

CASE 27.—Boy, 12 years. Father syphilitic.[23]

Convulsive attacks repeated at irregular intervals, never exceeding two months for 10 years without other symptoms. Then tibial and clavicular exostoses appeared. Specific treat ment cleared both the bone lesions and the convulsive attacks.

CASE 28.—Boy, 15 years[23]

Number of family died in early life. He had suppurative destructive lesion of nose following accident in early life. For some time had had epileptic attacks in right half of body. Died during one.

Postmortem.—Chronic gummatous meningitis of the left half of the dura. Sclerosis and atrophy of left cortex with softening in subjacent white matter.

CASE 29.—Girl 2 years[24]

Mother infected at time of conception of second child, which pregnancy resulted in a still birth. Third child, boy, divergent strabismus, coryza, conjunctivitis, convulsion, macular rash on hands and feet and osteochondritis of epiphyses all within the first six weeks of life. Late development mental and physical. Fourth child, the patient. In fourth month, sud den, rigid, painful contracture of right leg, lasting two or three minutes, increasing to from three to ten a day, with out loss of consciousness and without resulting palsy. Rapid mental and physical development. Anemia and splenic en largement. Specific treatment without result.

CASE 30.—Boy, 8 years. Parents syphilitic.[25]

Specific eruption in early life. In eighth year onset of epileptiform convulsions, stopped by specific treatment. Death later from typhoid.

Postmortem.—Thickened dura and slight atrophy of cere bral substance in region of paracentral lobule.

(*To be continued*)

18 Zappert. Left Oculomotor Paralysis the Result of Hereditary Syphilis. Neurol. Centrbl. 1895, p. 41.

19 Nettleship. Paralysis of the Cranial Nerves in Congenital Syphilis. Brit. Med. Jour. 1880, ii, p. 707.

20 Althaus. Case of Infantile Syphilitic Epilepsy. Med. Times and Gaz., 1874, p. 398.

21 Jackson. Cases of Disease of the Nervous System in Pa tients the Subjects of Congenital Syphilis. St. Andrews Med. Trans. 1868, i, p. 146.

22 Ripoll. Accidents tardifs de la syphilis héréditaire. Rev. méd. de Toulouse, 1880.

23 Hayd. Zur Casuistik der Gehirnsyphilis. Inaugural-disserta tion, München, 1886.

24 Fischl. Corticale (Jacksonsche) Epilepsie congenitale-syph. Ursprungs. Zeitschr. f. Hlk., 1890, p. 270.

25 Pellizzari. Della Syphilide Epilettiforme. Lo Sperimentale, 1879, p. 5.

THE RIPENING OPERATION FOR IMMATURE SENILE CATARACT, ITS PLACE *

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The earlier belief that a patient must await the time of complete maturity of a cataract before extraction could be performed with safety, led to the development of various artificial methods to hasten ripening But this meant the performance of a preliminary operation, and Schweigger, in 1890, advocated the removal of immature cataracts after the age of 50, claiming that sufficient hardening of the lens has taken place at this age to enable the operator to remove the entire cortex. Many operators have followed and advocated this practice and the number seems to be constantly on the increase

Yet it is a fact that ripening operations are still practiced by some surgeons with success, in all cases in which conditions make it humane not to wait for nature to bring about maturity, in preference to extracting an unripe cataract, while many other operators often perform the ripening operation under like conditions Thus there seems to be a great difference of opinion regarding this very important question

The ultimate question to be determined is, whether in those cases in which, for reasons to be mentioned later, we think it unwise to wait for maturity, we shall always extract an immature cataract, always perform a preliminary ripening operation, or whether there are not cases in which it seems best to do a ripening operation, and other cases in which the extraction of an immature cataract seems the wiser course It is for this purpose that I present this subject at this meeting, and ask for the experience of the members of the section

In years past this section has discussed the ripening operation,[1] and last year it expressed the almost unanimous opinion, in answer to Dr Bulson's[2] inquiries, that it believed the practice wise, in selected cases, either to remove an unripe cataract or to perform trituration and then to extract. In order to secure the most recent expression from operators of experience, I have addressed letters to many prominent ophthalmologists of the United States, from whom sixty-nine replies have been received. These replies form a supplement to my paper, and for the detailed statement of the questions asked, with their replies, the reader is referred to this portion of the paper

As evidence that trituration has not yet been discarded by many operators, the fact should be noted in these replies that twenty-six surgeons still practice the operation when occasion demands, that four rarely practice it but nineteen who have had some experience now do not practice it at all, preferring the extraction of immature cataract, usually with irrigation Of those who continue to practice trituration with satisfactory results, note the opinion of Colburn who has operated on forty-seven patients, of Ayres,[3] Wescott, White, Prince and others, who frequently practice intraocular massage with preliminary iridectomy, and have satisfactory results of Ball, who has had much experience and similar results, of Wilder, who practices Forster's method in "certain cases" in which he performs preliminary iridectomy but otherwise prefers to extract an immature cataract The following significant paragraph is by de Schweinitz [4]

> The safest plan is to wait for maturity, but if this is impossible or very undesirable, the author has been in the habit of extracting an unripe cataract in preference to performing a ripening operation. This formerly was also the practice of Knapp, but recently he has ripened immature cataracts in a certain number of cases by the method of internal trituration, as employed by Boerne Bettman[5] and others, and has been satisfied with his results.

That Knapp approves of artificial ripening under certain conditions is shown by his opinion expressed at the end of this paper

On the other hand, however, note the statement of Risley, who tried a series of twenty-five cases, mostly by trituration directly on the capsule, and does not think his results were as good as after extraction of immature cataracts He has entirely given up the operation, and does not think it is to be commended

Many others, as Kipp, Callan, Lewis, Hubbell, Bull, Ellett, Griffin, Reynolds and Posey performed trituration formerly but never do so now Others, as Taylor, M Black, and Carrow, have not cared to practice the operation, having secured satisfactory results with premature extraction and irrigation

There is only one point on which there is a general agreement, and that is, regarding the question of determining in what cases we shall not wait for maturity

With one exception, all believe that, under the circumstances to be mentioned later, either an immature cataract should be extracted or a preliminary ripening operation performed, but Fox, in answer to Bulson's questions a year ago, states "I do not extract immature senile cataracts, for I do not believe in taking the risk of serious secondary complications which nearly always take place, and render the ultimate results unfavorable," and in reply to my question as to whether or not he ever performs the ripening operation, he states "I do not," but modifies this statement, in answer to the question "Under what circumstances would you perform the operation," by saying "Only when the nucleus is translucent or sclerosed, and it becomes imperative to obtain better vision quickly" He further says "It is always dangerous to operate on an unripe cataract. The early removal of an unripe cataract leads to a great deal of trouble."

The methods which have been devised for the purpose of ripening an immature cataract, are

1 Puncture of the anterior capsule combined [illegible] iridectomy (Mooren. 1858)

2 Puncture of the capsule combined with [illegible] (Rhomer, 1886)

3 Preliminary iridectomy with trituration [illegible] the cornea indirect trituration (Forster, 1[illegible])

4 Trituration after simple paracent[illegible] iridectomy (T B P[illegible] operated on [illegible] soon after T A White operated by t[illegible] human [illegible])

5 P[illegible] with or without [illegible] direct trituration on the anterior capsule [illegible] 18[illegible] and B[illegible] 1892)

[illegible] it appears [illegible] the [illegible] D[illegible] and D[illegible] E[illegible]

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* Read in the Section on Ophthalmology of the American Medical Association at the Fifty-seventh Annual Session, June 1 [illegible]

1 Weeks Treatment of Immature Cataract," The Journal A. M. A p. 855 Sept. 30 1905 [illegible] de Schweinitz [illegible] Cataract and Its Treatment," The Journal A. M. A. p. 14[illegible] Dec 8 1900

2. Bulson "The Extraction o[illegible] Immature Senile Cataract," The Journal A. M. A., Sept. 22, 1[illegible]

3. Ayres Artificial Ripening of Cataract," [illegible] Clinic, Oct. 10 1896.

4. [illegible]

5. [illegible] "Ripening [illegible] [illegible]

[illegible] Cataract" [illegible]

practice exclusively and with great success, the method of Pooley Knapp considers needling the capsule or direct trituration the only efficient method

Operators of experience disagree regarding the selection of the method of Forster or Bettman Ayres, Wilder, Prince, Wescott, and others prefer the former Wilder is strongly opposed to direct trituration, having had two serious results following this method, but Colburn, Ball, Weeks[1] and others prefer it to trituration outside of the cornea

THE SAFETY OF TRITURATION OF THE LENS

Considering the large number of operators who have performed this operation, the number of cases in which ill results have occurred have been very few Only three are reported in which loss of life resulted, and two of these might be excluded, because one proved to be an unfavorable case (Wilder's), and the other was due to iris prolapse and infection (Colburn's) In one there was so much reaction that later it became necessary to remove the eye This was Wilder's case, in which he did trituration directly on the capsule, "which, however, was found to have a choroiditis, together with posterior staphyloma, so that it would not have been a favorable case for any kind of intraocular operation" Baker's case was one of glaucoma, in which the eye subsequently had to be removed on account of pain

There have been a number of cases of iritis, but no cases in which ultimate poor vision resulted, though Wadsworth feels that vision was not so good in some cases (Wadsworth, Callan, Reynolds, Hansell) Four cases of glaucoma were reported, one each by de Schweinitz[1] and Griffin, both ending well, likewise another by Donovan, in which it became necessary to remove the lens Posey had a case in which he suspected retinal detachment, but if so, it was cured by rest in bed, and the ultimate results were good With very few exceptions, operators who have had experience do not regard the operation as unsafe in uncomplicated cases

THE EFFICIENCY OF THE OPERATION

A study of the opinions expressed shows that the operation is most effective in ripening senile cataracts when a hard nucleus is present and it is in just such cases that the operation would be most needed, but that it is entirely ineffective in young people, and in cases of soft cataract This is expressed by Dr Edward Jackson,[7] who practiced Pooley's method He says "In the matter of efficiency, my experience indicates that indirect massage is efficient only in senile cataract, that is, only when the opaque lens contains a rather large, firm nucleus" Dr J A White[8] has had some success with the same method in cases of cortical cataract, though he has had to resort to a repetition of the operation in two cases He also states, however, that the operation is most successful when a hard nucleus is present, which, he says "Acts as a base on which to crush the cortex" Several operators express some dissatisfaction, i e, inability always to secure ripening, but do not stipulate the character of cases Weeks says "I have not found that the lens substance escapes more readily after the ripening operation than when the immature cataract is extracted," and Knapp, Lewis, Bull and Hubbell make similar complaint of failure in some cases These, however are exceptions, and there is not much complaint on this point

TIME REQUIRED FOR RIPENING

From one to four or five weeks are necessary, according to most of the opinions expressed, but extraction is not practiced usually for ten weeks

It would seem that a second operation for membranous cataract is not required so often after extraction following a ripening operation, as after extraction of immature cataract, though many operators state that they do not think there is any difference in this respect

OBJECTIONS TO THE OPERATION

It does not appear that the objections to the operation by those who have had experience and do not commend it arise from ill results, as these have been comparatively rare, but rather because it is believed by many that an immature cataract can be removed as easily as an artificially ripened one, many believing that the trituration thickens the capsule and causes it to adhere to the lens substance[9] One operator (Bulson[2]), who prefers the extraction of immature cataract, and presented a paper on this subject before this section a year ago, believes that this is the only place for the ripening operation, i e, "unless patients having immature cataracts, should, from nervousness or other reasons, give the operator a feeling that but little manipulation at the time of extraction should be employed"

An immature cataract can sometimes be well removed after the age of 60, and even before that time if it is not very immature, but without irrigation before that age, and often after 60, considerable cortical matter is apt to remain, to cause much trouble later with iritis and membranous cataract. The enthusiasm with which those who practice irrigation in cases of extraction of immature cataract (with the apparatus of Lippencott, Carrow or Reik) leads one to believe that it is of great value under such circumstances Carrow practices irrigation in all cases, ripe or unripe, and extracts "whenever the patient loses reading ability"

Some object to trituration on the ground that it means an extra operation, and this is valid where it is not required, in those cases in which an immature cataract can as well be extracted, but, on the other hand, some operators often perform preliminary iridectomy, which also is an extra operation Thompson, of Indianapolis, advises preliminary iridectomy in all cases in which for any reason there is doubt regarding successful results Weeks still practices trituration occasionally when he does a preliminary iridectomy, evidently believing it to be an aid, but not of enough value to warrant the extra operation unless preliminary iridectomy is to be performed

CONTRAINDICATIONS AND INDICATIONS

In no case of immature cataract would operative measures be resorted to when the patient had sufficient vision in the other eye No definite degree of loss of vision can be defined in exact figures, for other things have to be taken into consideration in deciding the advisability of the removal of, or ripening of, an immature cataract. The slow and equal development in both eyes, of central cataracts, the loss of ability to earn a livelihood when dependent on the same, and especially when others, too, are dependent, the unhappiness which may result to the patient and those about him, and the general and local conditions have to be considered

I have been in the habit of performing the Forster

7 Jackson Indirect Massage of the Lens for the Artificial Ripening of Cataract. N Y Med. Jour Oct. 28 1893

8 White Remarks on Immature Cataract and the Best Method of Hastening Maturity Ann of Ophth 1892, vol xxi No 4

9 Crumb A Unique Point in Removing the Soft Lens Matter from the Capsule of an Unripe or Over ripe Lens Amer Jour of Ophth March 1899

operation in uncomplicated cases of immature senile cataract having much soft cortex (recognizing the fact that many lenses are hard, even though not opaque, particularly in patients over 60), and in those patients having two eyes with slowly maturing cataracts and poor vision, enough to interfere with earning ability or to cause the patient unhappiness This has been done with satisfaction In no case has a secondary operation been necessary, and in all cases good results have followed, but I am not prepared to say that equally good results might not have followed extraction with irrigation, though I am sure irrigation would have been necessary As an example the following case is reported

Patient—A. T., male, aged 64, came under the observation of one of my patients, who elicited the following facts

History—The man had been a barber, supporting comfortably a family of six, up to two years previous, when his sight became so poor that he was obliged to seek other work. He took up the making and peddling of candy, and left his small home town to come to the city He was not able to earn more than enough to support himself, and his wife was supporting the remainder of the family by taking in washing He demurred at coming to see another oculist, as he had seen several, and had been told that he would have to wait for his cataracts to mature

Examination—Showed nuclear cataracts, just about the size of his pupils, equal in the two eyes, and vision 10/200, improved but little with a mydriatic.

Treatment—The patient was advised to have a ripening operation, and the risks were explained. He consented gladly, and a preliminary iridectomy was performed on one eye, with careful trituration outside of the cornea. Three weeks later, the lens, being entirely opaque, was removed, a small amount of cortex remaining Only slight reaction took place

Result—He left the hospital two weeks later and soon went home In three months he returned and was fitted with glasses, giving 20/30 vision I saw him some months later, and the other lens showed no further development of the opacity He has returned to his trade, and is able to support his family

The details of this case are recorded as it furnishes a good example of the circumstances which make it practically imperative that some such procedure should be practiced for humane reasons

It is evident that the operation is not to be commended in cases complicated with high myopia, choroiditis, or other inflammatory conditions, nor in cases predisposed to glaucoma, nor where adhesion to the iris is present. Nor is it necessary where a cataract is nearly mature, nor in cases of patients over 60, when the cortex is apt to be of such consistency that it may be removed without much difficulty In such cataracts the cortex may appear translucent, or amber-colored Nor would it seem necessary in the case of well-behaved patients, when irrigation is used by an operator experienced in this practice In this matter, I do not speak from experience, for I have not yet practiced irrigation but I judge from the favorable comments made by colleagues whose judgment I respect, and the fact that the method is gaining in favor despite opposition formerly expressed

CONCLUSIONS

If, therefore we grant the success and safety claimed by those of much experience in irrigation the operation of ripening is indicated 1 In case of immature cataract (not mentioned as contraindicated) *in which a preliminary iridectomy is to be performed* 2 In those patients who would not be likely to behave well during the extraction, thus preventing the operator from performing much toilet or from practicing irrigation

If irrigation is not practiced trituration of the lens would be indicated in all patients with immature senile cataract under 60, in whom for reasons mentioned, relief is required

Questions asked were

1 Do you ever perform the ripening operation in the case of immature senile cataract?
2 Have you had any ill results from the operation If so of what nature?
3 Under what circumstances would you perform the operation?
4 If you do not perform the operation what are your reasons? Are they based on your own experience?
5 Have you secured as good results after extraction following the ripening operation as after extraction in the case of very immature senile cataract
6 Do you find from actual experience that an operation for membranous cataract following extraction is required as often when the ripening operation has been performed as after extraction of a very immature cataract?

OPINIONS OF PROMINENT OPERATORS

HERMAN KNAPP New York I regard external trituration as efficient and practice internal trituration or needling the anterior capsule at different places and use irrigation following extraction but all of the ripening methods are more or less unsatisfactory their shortcoming is insufficiency Experience with the ripening operation has made me more conservative than I was formerly I approve and do an artificial ripening of immature cataract (in selected cases) but prefer to let the cataract ripen naturally

J E COLBURN Chicago 1 Yes usually with preliminary iridectomy direct massage (Bettman) followed in about ten weeks by extraction 2 None that could be attributed to the procedure One failure in 47 cases due to prolapse of iris and secondary infection Two cases of iritis making good recovery 3 When both eyes are involved sufficient to prevent useful vision and in monocular amblyopia 5 Yes 6 Yes rather thick in some cases

S C AYRES Cincinnati 1 Yes 2 No 3 When the opacity of both lenses was advancing about equally 4 I never recommend the operation unless the perception and projection are good and the eyes apparently healthy 5 I never extract very immature senile cataracts My results after trituration have been very satisfactory

A. E PRINCE Springfield Ill 1 I frequently make a preliminary iridectomy in immature cataract and use extraocular massage of the eye, after the iridectomy is completed 2 I never had to my knowledge any unfavorable result which I can attribute to this operation 3 I perform the operation usually in cases of middle life where from any cause it is desirable to hasten the time of extraction 5 I think the results are satisfactory after the ripening operation 6 I consider the question of whether a membranous cataract is more liable to follow to depend on the thoroughness with which the irrigation has been carried out If considerable cortex is taken into the capsule a membranous cataract would be liable to follow

T MOORES BALL St Louis 1 Yes frequently 2 No 3 In cases of slowly maturing binocular cataract 5 Yes 6 I am unable to say I performed a number of these operations in the last fifteen years I am partial to preliminary iridectomy I also triturate the lens directly the so-called method of Bettman I have done thirty or forty of these operations

H V WÜRDEMANN Milwaukee 1 Yes 2 No 3 Slowly progressing lenticular opacities in both eyes of active adults under 60 years of age Over that age the lens is sufficiently hard to permit of successful extraction even though nearly clear 5 Yes 6 I endeavor (*a*) to extract lens in capsule (*b*) failing, in that I make large capsulotomy with forceps (*c*) I use lavage to remove lenticular débris, and hence in recent years have much smaller percentages of secondary capsulotomies.

FRANK ALLPORT Chicago 1 Yes 2 No 3 When patient is blind in both eyes, but neither lens is ready for operation Still I prefer to operate on an immature cataract rather than to ripen one artificially 5 Yes

C D WESCOTT Chicago It is my custom to do a preliminary iridectomy in all cases of immature senile cataract in which I operate After making the coloboma I usually stroke the cornea a number of times with the spatula making sufficient pressure to bring it in contact with the anterior surface of the lens A few times I have introduced the spatula into the anterior chamber stroking the anterior capsule directly where it was necessary to use the instrument to replace the pillars of the iris I believe that the ripening of the cataract is hastened by the iridectomy alone and still more so by the procedure which I have described although it can not be proved My results have been satisfactory I can not say that the operation for membranous cataract following the extraction is influenced by the procedure

W B MARPLE New York 1 Only occasionally 2 I have had no ill results 3 I perform it less and less frequently and I have not done it on any private patient 4 In the nuclear cataract of old sclerosed lens I get perfectly good results even when vision is still good If I had a patient who's vision was much impaired in each eye from ordinary senile cataract (not sclerosed lens) which were immature I would not be liable to perform a ripening operation but not if one eye was fairly good 5 Yes 6 I have seen no especial difference as I use irrigation of anterior chamber rather freely

CROPPER C HARLAN Philadelphia 1 I have done [illegible] 2 No serious results 3 When operation [illegible] and vision is not sufficient to earn [illegible] ence too limited to decide

H CLIFFORD Omaha 1 Yes [illegible] an infection of the lens capsule had result Both the preparatory dilation on [illegible] patients under 50 something or allow the patient to go about the same 6 I think

LUCIEN HOWE, Buffalo 1 Yes occasionally Rhomer s method 2 No 3 Only when the condition of the other eye makes some such hastening essential 5 About the same. 6 No difference ever observed I must add however that it is still a question in my mind whether this or any other of the ordinary ripening operations does really ripen at least, in the majority of cases

S THEOBALD, Baltimore 1 Yes 2. No except at times a little rubbing off of the pigment from the posterior surface of the iris near the pupil, and some iritis more than would follow a simple iridectomy 5 Better results. 6 I do not.

DUNBAR ROY, Atlanta 1 Occasionally 2 None. 3 In cases of preliminary iridectomy 5 Yes. 6 It is not required as often

H F HANSELL, Philadelphia 1 I have operated in several cases of young senile cataracts those developing in individuals under 50 years of age. 2 Yes, iritis. 3 In the circumstances mentioned under No 1 5 Yes. 6 I have found no difference.

EUGENE SMITH Detroit 1 Seldom 2 No 3 To enable patient to work when necessary to support family 5 Yes, though greater danger of iritis 6. Yes.

CHARLES A. OLIVER, Philadelphia 1 Yes. 2. No 3 Long standing uncomplicated (particularly unclean) cases. 5 Yes 6 No

WILLIAM CHEATHAM Louisville 1 Yes Iridectomy with massage on cornea of capsule. 2. No 3 Any reason necessitating an early operation more often in those cases in which both cataracts are progressing evenly 5 Yes. 6 Yes. My experience is not large enough for my statistics to be of much value.

N M BLACK Milwaukee 1 Yes, occasionally 2 No 3 In cases when there was some clouding of the lens sufficient to interfere with vision in a patient who needs to use eyes for purpose of carrying on his business. 5 Practically no good, I think. 6 Can not say

LYMAN WARE Chicago 1 Yes 2 No 3 In cases of binocular cataract, when necessity compels use of eyes. 5 Yes 6 Have no data, but think not.

J H CLAIBORNE, New York 1 Yes. 2. No 3 In slowly growing cataracts chiefly in myopia and in persons who can not afford to wait. 4 Yes. 5 Yes 6 Yes

C. R. ELWOOD Menominee, Mich 1 I have not. 3 When both eyes were about equally advanced and ripening slowly, or probably if only serviceable eye was cataractous and ripening slowly 4 I believe natural ripening safest, and my patients have happened to have one eye much more advanced than the other, or one lens ripe when presented 6. My experience has been only after natural ripening With slowly ripening cataract in patient's only eye I would do a preliminary iridectomy, and at the same time very carefully massage lens

HORACE M STARKEY Rockford Ill 1 Yes, the Forster operation as modified by Bettman 2 No 3 When vision is reduced in each eye by small, non progressing or slowly progressing central opacities 5 Yes, or as in mature senile cataract. 6 Have observed no difference.

A. E. BULSON JR Fort Wayne 1 Yes, in the few instances in which I have performed preliminary iridectomy before cataract extraction. It is my opinion that preliminary iridectomy alone, without trituration will hasten maturity of cataract. 2. No Once had considerable swelling of lens, but it did not prove serious in results. 3 In the few instances in which preliminary iridectomy was indicated In nervous patients, in whom manipulations to extract immature cataract might be disastrous, and seldom if ever in patients beyond 65 years of age, as there are no advantages to be obtained in such cases over extraction of immature cataract. 4 I do not believe advantages, taking all risks into consideration are more than in extraction of immature cataract under proper conditions (combined operation irrigation atropin, etc.) 5 Yes have only very few cases in which ripening operation was performed 6 My experience is limited but would say yes. I have not attempted the ripening operation except in a very few cases and in all of those I started out to do a preliminary iridectomy with the intention of making extraction later My experience has been that a preliminary iridectomy alone is sufficient in most cases to hasten the maturity of a cataract. Therefore, inasmuch as I do an iridectomy in all cataract extractions it occurs to me that preliminary iridectomy is all that is indicated in case the operator does not care to undertake the extraction of an immature cataract by the combined operation I have had such good results from the extraction of immature cataract that I have not given much thought to the value of the ripening operation but I believe there is a place for the ripening operation and I would probably prefer to use the operation, if used at all in those patients having immature cataracts who from nervousness or other reason give the operator a feeling that but little manipulation at the time of the extraction should be employed

J L THOMPSON Indianapolis 1 The only perfectly safe ripening operation for immature senile cataract in my opinion is a preliminary iridectomy 2 I have never met with any ill results from this operation 3. It is called for in cases of nuclear cataract in both eyes when the acuity of vision is not sufficient for one to read large print, when the patient becomes tired of waiting as he frequently has to do for many years. 5 By this method I obtain better results than when I do iridectomy and extraction of the lens in one operation 6 Fewer cases of thickened capsular threads are met with after this preliminary operation

J E WEEKS New York 1 I have performed it, but do not do it now except in cases in which I perform a preliminary iridectomy directly on the anterior portion of the lens capsule 2. No but I have not found that the lens substance escapes more readily after the ripening operation than it does when the unripe or immature lens is extracted 3 None except when preliminary iridectomy was performed 4 I have not found it to be of sufficient value to make it worth while My opinions are based on personal experience 5 About the same 6 Yes

S D RISLEY Philadelphia 1 I did so in a considerable series of cases but abandoned the operation. 2. Never had any immediate ill results from inflammatory reaction 3 I would not perform it under any circumstances 4 My experience very soon taught me or seemed to teach *that the difficulties of extraction* were enhanced. The cortex seemed glued to the capsule and the capsule itself tough and gray in cases in which the cortex became opaque after trituration. In cases in which this did not follow the lens when amber colored or translucent, was found already hard and operation therefore was unnecessary 5 My results after ripening were no better I think not so good. 6 I have *no compiled statistics on this point, but my impression is that it* is required as frequently and is usually more difficult because of greater toughness of capsule I did the ripening operation in 25 consecutive cases of immature cataract, most of them by direct trituration of the capsule some of them by the method of Forster but I had such discouraging results in the subsequent extractions as compared with the results obtained in the case in which the operation had not been done, that I was quite glad when I was through with them and have never ventured on it since. This was about ten years ago I do not think the operation is to be commended.

GEORGE E. DE SCHWEINITZ Philadelphia 1 Not often 2 Once only in secondary glaucoma from swelling of lens the ultimate result was perfectly good 3 In very slowly maturing central cataracts with much clear cortex in patients under 50 4 It is best to wait for maturity but no serious objections to removal of unripe cataract after 60 and do not advocate ripening operations. 5 Yes 6 Yes.

W H WILDER Chicago 1 In certain cases I perform *preliminary iridectomy and at the same time practice massage of lens* through the cornea according to method of Forster I never triturate the lens with an instrument pressed into the anterior cornea, as I used to do occasionally 2. With two cases treated with anterior cornea trituration I had very serious results In one of these there was violent reaction that fortunately subsided. In the other the reaction was so violent that the resulting iridocyclitis necessitated removal of the eye, *which was found to have a choroiditis*, together with posterior staphyloma, so that it would not have been a favorable case for any kind of intraocular operation. 4 The reasons given above have influenced me against performing the operation for I would rather operate on an immature cataract and do a subsequent needling operation 5 I am unable to judge. 6 I can not say

T R. POOLEY New York 1 I formerly did, but not now 2. No 3 None 4 It is safer and better to wait, and the operation is easier and safer 5 Yes 6 I do not know I have kept no statistics on this point.

O F WADSWORTH Boston 1 I have done so, not often, and not *of late years I presume you refer to massage after evacuation* of aqueous. 2 Iritis, with posterior synocha etc. 4 In part, I *think the dangers from the operation at least as great as those* which immaturity adds to the ordinary cataract operation 5 In some instances yes. 6 No

A. A HUBBELL Buffalo 1 Not for eight or ten years. Before that I practiced it considerably I did a small iridectomy and then with the elbow of a strabismus hook triturated (kneaded) the lens through the cornea. 2 None whatever 3 None. 4 Yes, *my own experience. I gave it up because the ripening did not* always take place especially when the opacity was nuclear because the trituration or kneading affected only the anterior portion of the lens, but more particularly because removal of immature cataract without the ripening process gave just as good results 5 Yes but no better 6 Yes.

C S BULL New York 1 I formerly did, but for some years have given it up 2 None but failure to succeed, *and in several* instances the manipulation caused partial disappearance of the opacity 3 This question is practically answered under No 1 4 This question is practically answered under No 2. 5 No 6 Fully as often

O DODD Chicago 1 No 2 No serious results myself, but have seen very serious results from the operations I have witnessed by others 3 Not at all 4 In my experience it has been of no benefit, as the lens does not come out more easily or completely than without it. It is necessary to wait some time after operation before extraction can be done, and had rather do extraction and wait after for cortex to clear 5 Yes In the few cases I have done. 6 I think so but my experience is not large enough to say

E E. HOLT *Portland Maine 1 No not in recent years* 2 No 4 My reason take it all in all is that it is better to perform the regular operation 5 Yes In the few cases in which it was employed years ago 6 Not sufficiently to state

P A CALLAN New York 1 I formerly did the operation but not for several years. 2 Yes iritis 3 I should rather extract the immature cataract, having made a preliminary iridectomy 4 I get better results from a preliminary iridectomy as my results from the ripening operation were not satisfactory 5 About the same 6 Very little difference

C. J KIPP Newark 1 Not now Years ago I did several but as they failed to hasten the ripening materially, I have given up the operation 2. No 5 Yes 6 Yes

H D BRUNS New Orleans 1 Which operation? I have done iridectomy and trituration without much, *if any effect often* Tried discission many times years ago with too much effect. 2. Senile eyes, on which discission has been performed do not quiet down readily and one has usually to do the extraction in an eye not entirely healthy My experience is that the slightest pathologic condition sometimes one which we hardly believe to have any importance militates against perfect success in the extraction of senile cataract and the final result I would rather take the chances of operation on a very unripe senile cataract, using lavage if necessary if driven to it by humane motives than risk discission and subsequent extraction From trituration after preliminary iridectomy I am not sure that I have seen any result. I write entirely from my own past experience.

O A. GRIFFIN Ann Arbor 1 I did formerly but rarely now 2 *Yes, an acute glaucoma but it ended well.* 3 When cataract exists in each eye is partially matured and the process has become stationary 4 Have extracted immature senile cataracts in few cases without ripening and obtained good results 5 Yes, but not better, as stated above 6 Have not sufficient data on this point.

A R BAKER Cleveland 1 Yes formerly 2 Yes iritis two or three times, and glaucoma once 3 I would not perform operation except in patients under 45 years of age 4 More satisfactory results are obtained by extracting immature cataracts first making preliminary iridectomy and extracting immature lens two or three weeks later with preliminary capsulotomy 5 No

M BLACK Denver 1 No 3 I really can not conceive of any condition which would cause me to subject the patient to this unnecessary operation 4 I believe the lens of a patient which is sufficiently opaque to demand extraction at all is hard enough to remove without preliminary ripening If any doubt remains as to the cortical substance being all removed, anterior chamber irrigation should be practiced.

H. M POST, St Louis 1 I performed the operation several times fifteen or twenty years ago I have not done it since. 2 No 3. I do not now think of any 4 Under antiseptic precautions I do not hesitate to perform extraction with an iridectomy as soon as the difficulty in reading is serious I have had excellent results in such cases.

E C ELLETT Memphis 1 I do not do it now though I have done it a few times. 2 No 3 I would as soon extract an immature cataract as to do the operation. 4 I regard it as unnecessary 5 and 6 Too few cases to say

J M RAY Louisville 1 I did up to the last five or six years. 2. None except I think that the massage produces adhesions of lens substance to capsule, and therefore the lens sticks and is more difficult to get out of capsule 3 Only when there is one eye, and if I did a preliminary iridectomy I might massage the lens. 4 As given above and from experience, I found myself less inclined to the operation, and more inclined to remove a semi transparent lens 5 I have no statistics on subject at hand. 6 While I have no exact data I should think just as often.

C A VEASEY, Philadelphia 1 No 2. Difficulty in extracting the ripened lens, which is apt to adhere and to require greater pressure. There is more severe reaction. 4 As stated above difficulty in expelling the lens, because of adherence, more frequent loss of vitreous delivery and more severe inflammatory reaction 5 No 6 I have not noticed any difference.

D S REYNOLDS Louisville 1 I have abandoned all ripening operations as unsatisfactory and unnecessary Extraction of immature cataract is more satisfactory because it saves time and avoids the complications of iritis etc. 2 Yes. Iritis frequently opaque capsule in two cases cyclitis. 3 I formerly did [illegible] when both eyes were unable to read and neither mature. 4 Yes. as stated above 5 Sometimes 6 Yes

A. BARKAN, San Francisco The only operation for ripening cataract done in a normal eye if slowly developing nuclear cataract was an iridectomy The cornea was very gently stroked [illegible] means of the strabismus hook. Reaction was very great. Iritis and slight cyclitis followed and the case never came for cataract [illegible] sequently I have never since then done a truly ripening operation of immature or senile cataract. The preliminary iridectomy I have done repeatedly especially when one eye was a [illegible] with no results so far as ripening was concerned, [illegible] and rather helping to secure good results when the time for extraction came on the other eye. I am opposed to [illegible] on the grounds of conservative surgery and think the [illegible] done at all efficiently is likely to be extended through the [illegible] proper to the surrounding uveal membrane. I [illegible] ject to these operative proceedings on my own eye.

F PARK LEWIS Buffalo 1 Of late years I have entirely given up the ripening operation 2. In many cases it did [illegible] isfactory Ripening did not seem to be hastened [illegible] on the other hand it seemed to retard the process of [illegible] It moreover thickened the capsule and made [illegible] subsequent management. 3 I doubt if any 4. [illegible] as given as above and are wholly based on my own experience. My reasons for not employing artificial ripening are [illegible] that with normal salt irrigation or extraction in the capsule [illegible] possible to get better results in the case of [illegible] that which follows when the capsule has been [illegible] uration 5 My impression is that I have. I have not [illegible] made statistical comparison. 6. More so with the same [illegible] tion as above

WILLIAM CAMPBELL POSEY Philadelphia 1. [illegible] ago I did several ripening operations for cataract, but I have given up the operation I have found that I secured as good results in operating on immature cataracts without [illegible] ing as I did when this operation was performed. [illegible] in which the lens was directly triturated, I think [illegible] tachment of the retina, as the tension became much diminished and I feared for a time that the eye would be lost. Under treatment for detached retina, i. e., rest in bed with a pressure bandage the eye finally gained its normal tension, the lens was removed and the patient obtained good vision, which has been retained for four or five years. I believe that the procedure of washing the anterior chamber after the removal of an immature lens has done away with the necessity for the preliminary ripening procedure

D T VAIL Cincinnati 1 I have done it a number of times 2 No, bad results, in some cases the [illegible] 3 None 4 Yes. I find I can extract [illegible] and the ripening is unnecessary also that it is not at all [illegible] same but hard to judge each case is [illegible] had to be discussed.

FLEMMING CARROW Detroit 1. I [illegible] operation in cases of immature senile cataract [illegible] lens as soon as the patient begins to lose [illegible] say that in the last three or four years I [illegible] lens when the patient loses reading [illegible] such cases I have a little instrument with which [illegible] the anterior chamber Knowing that [illegible] is immature there is more or less [illegible] it plainly I always remove the lens and [illegible] anterior chamber after removing [illegible] is hard or soft diabetic or otherwise.

WILLIAM ZENTMAYER Philadelphia 1. [illegible] exceptional cases in which it might have been [illegible] hesitated to remove the lens either [illegible] or with iridectomy at the time of [illegible] the ripening operation. I can [illegible] sults after the removal of [illegible]

H B YOUNG Burlington, Iowa 1. [illegible] No trouble of any kind. 3. [illegible] vision 4 With Reik's flushing [illegible] extract the immature cataract. [illegible] 6. My patient was from a distance [illegible]

A. J DONOVAN Butte, Mont. [illegible] a severe reaction, increased [illegible] then I prefer to do it at once [illegible] 4 Yes if the patient con[illegible] vision is not useful. I al[illegible] boric-acid solution and so [illegible] which I had cause to reg[illegible]

G C. SAVAGE Nashville [illegible] Under no circumstances. [illegible] cataract can be removed [illegible] mer 6. After any opera[illegible] of the capsule the latter [illegible]

H B LLL's Los Ange[illegible] in hands of others—no [illegible]

W H H[illegible] San Fr[illegible] mature cataract in an [illegible] far my experience has [illegible]

F B EATON San Fra[illegible] double cataract [illegible] low for earning a [illegible] cases below 60 years [illegible] not [illegible]med on [illegible]

MARK D STEVENS [illegible]

[illegible]

the subsequent extraction of the lens mature or immature as the case may be 4 Unwillingness to subject the eye to needless surgery and manipulation My experience with artificial ripening caused me to conclude that the perplexities of the extraction were in no way relieved by it The cortex, instead of being loosened from the capsule, seemed to be made more apparent and the extraction more difficult 5 Certainly the results were not appreciably better 6 Yes

C R HOLMES, Cincinnati 1 I did formerly but do not any more. 2 Never very serious but some unpleasant results imperfect ripening requiring a repetition and rupture of the capsule and dislocation of the lens 4 For the reason given above 5 I have secured better results by extracting the immature senile cataract without ripening 6 Not positive as to this point but as the membrane varies in nearly all cases from a mere film to a dense membrane I needle in nearly all cases as there is no reason why the transparent media need not be absolutely clear

R L. RANDOLPH Baltimore 1 No 2 Nothing more than iritis 3 Have no confidence in the operation 4 Have operated as well as I remember about twenty times and succeeded in ripening twice. In nearly all the cases had an iritis. 5 In the two cases, yes. 6 Am not prepared to say

[THE SYMPOSIUM ON CATARACT, OF WHICH DR TODD'S PAPER IS A PART WILL BE CONTINUED NEXT WEEK]

Clinical Notes

A CASE OF CARCINOMA OF THE SPINAL CORD

CHARLES LEWIS ALLEN, M.D
Pathologist and Assistant Physician New Jersey State Hospital at Trenton
TRENTON, N J

While carcinoma of the vertebral column is not so infrequent and may affect the spinal cord secondarily the growth of a cancer in the cord itself is very rare and when it occurs its point of origin is usually in the meninges Schlesinger[1] states that carcinoma in the interior of the vertebral canal, with the exception of that growing from the bony structures, is always secondary and very rare and that growths in the cord itself are exceedingly infrequent, having so far been found in cases of general carcinomatosis only Spiller and Weisenburg[2] in a recent review of the subject of carcinoma of the nervous system also speak of the rarity of growths in the spinal cord itself Among the 11 cases which form the basis of their paper, there were 3 cases of cancer of the vertebral column with a fourth case presenting symptoms suggesting such involvement, which, however, did not come to autopsy, but in no instance was a growth, arising in the spinal cord itself, noted

The rarity of this condition then and the fact that it was accompanied by secondary changes, which, in the absence of previous history, might make the diagnosis a matter of some difficulty seems to justify putting on record the following case

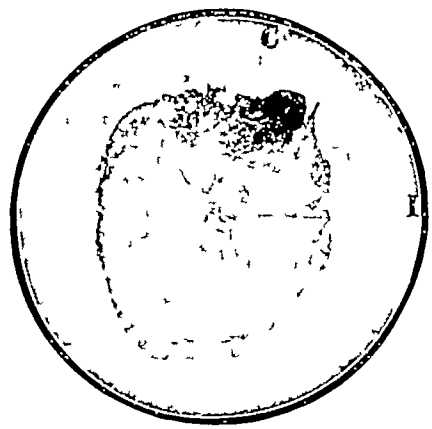
Patient—Female aged 65 years a terminal dement, inmate of the State Hospital for 30 years

History—During the latter part of the spring of 1905 she was found to have a lump in her left breast About six months later this broke down and formed an ulcer which would not heal In March, 1906, it was noticed that she had difficulty in walking and by the middle of April she could no longer get about She was first examined by me Aug 19 1906 at which time she presented the following picture

Symptoms—Patient was much emaciated and bedridden In the left breast was a tumor about the size of a small orange which had broken down and was discharging ill smelling pus Over the sacrum there was a bedsore about four inches in diameter with a gangrenous base which had involved the bone The movements of the head and upper extremities were normal The legs were completely paralyzed, their muscles flabby and atrophied and in them no reflexes could be obtained The left leg was much swollen The middle of the right thigh measured 11¾ inches, while the left thigh measured 31 inches The circumference of the right calf was 5½ inches, the left calf, 9⅝ inches The testing of sensation was unsatisfactory owing to the mental condition of the patient, but there was apparently complete anesthesia over both lower extremities There was complete paralysis of the bladder with retention of urine and dribbling She died Aug 21, 1906

Autopsy—Thirteen hours after death an autopsy showed the following Nothing was macroscopically abnormal in the brain The bedsore over the sacrum had extended to the bone, causing an osteitis of the lower lumbar and sacral vertebræ whose bodies were soft and on manipulation crumbled to a grumous mass There was necrosis of a considerable portion of the sacral arch on the left side The spinal dura mater was thickened and pigmented The cord in the lower lumbar and upper sacral regions was inflamed and softened to a pulpy consistency The cervical and dorsal regions appeared normal and cross sections showed no gross changes above the softened area The heart was small, pale and flabby, its valves normal The lungs showed a few adhesions and were much congested Distributed throughout both lungs were a great number of cancerous nodules varying in size from that of a millet seed to that of a split pea The bronchial glands were enlarged The liver contained a number of cancerous nodules of sizes varying up to that of a small orange The kidneys were small, hard and contained extensive cancerous deposits The aorta was much enlarged and there was thrombosis of the left external and common iliac veins

Microscopic Examination—Sections from the cerebral cortex



Photograph of cross section of the cord C cancerous nodule I infiltration of cancer cells

showed much pigmentary deposit in the cells of Betz of the paracentral lobule and slight thickening of the pia arachnoid Sections of the spinal cord showed great thickening with round cell infiltration of the pia arachnoid in the lower dorsal, lumbar and sacral regions In the latter location there was extensive necrosis involving a large part of the posterior portion of the cord This was most intense in the middle and lower lumbar region, the area affected becoming smaller as the upper lumbar region was reached In the upper lumbar region, extending through less than one segment about the level of the border between the first and second segments there was a small cancerous mass which had apparently grown from the pia arachnoid into the anterior fissure It had compressed the anterior pyramids, interfered with the anterior nerve roots and from it small nests of cells had invaded the anterior columns and anterior horn on one side The whole cross section of the cord at this level was distorted (See illustration) The nerve cells here and in sections immediately below were swollen, showing intense chromatolysis and loss of nuclei There was degeneration of the posterior columns extending from the lumbar region to the medulla This was confined in the dorsal and cervical regions to the tracts of Goll This degeneration was shown both by the Weigert and by the Marchi methods The Marchi method demonstrated in the softened area in the lumbar region, diffuse degeneration involving the whole cross section of the cord The cancerous nodule was in structure an adeno

1 Flatau Jacobsohn and Minor Handbuch der Pathologischen Anatomie des Nervensystems
2. Jour of Nerv and Ment Dis August 1906

carcinoma The nerves of the sciatic and lumbar plexuses showed no degeneration by Weigert's method, but by Marchi's method some of the sections showed some black scales This was more marked in the nerves of the right side The primary growth in the breast was an adeno carcinoma, the metastatic deposits in the lungs, liver and kidneys corresponded with it in structure

In this case the primary paraplegia was undoubtedly due to the growth of the cancerous nodule which interfered with the anterior columns and nerve roots and compressed the cord in general The myelitis in the lumbo-sacral region was due to an extension of the inflammation from the bed sore through the bones The ascending degeneration was due to this latter lesion

LARGE SOLID TUMORS IN THE INGUINAL CANAL

W LOWNDES PEPLE, M D
RICHMOND, VA.

A REPORT OF THREE CASES

I report the following cases because, from a casual search, I believe them to be somewhat unique both as to the gross and microscopic findings The first two cases I saw with Dr Stuart McGuire as his clinical assistant

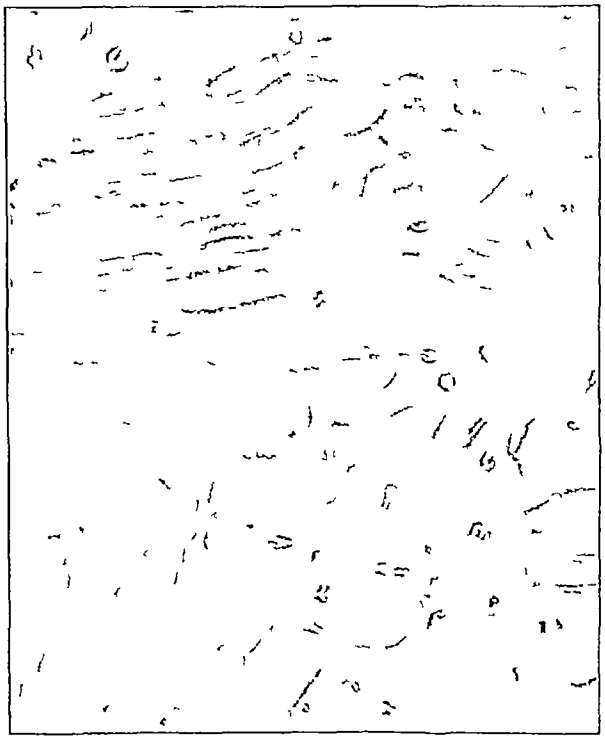


Fig 1—Drawing of section from specimen Case 1 Magnified 400 diameters.

the third in consultation with Dr M E Nuckols For the microscopic findings I am indebted to Dr E Guy Hopkins of the Laboratory Department of the University College of Medicine

CASE 1—Referred to the Virginia Hospital by Dr G S Bell of Oriental, N C, and operated on by Dr Stuart McGuire May 1, 1903

History—Mrs W, aged 19 married unipara has always been a strong, healthy girl She had the diseases of infancy, except diphtheria and scarlet fever When she was 10 years old she fell across a wagon wheel and hurt her side not

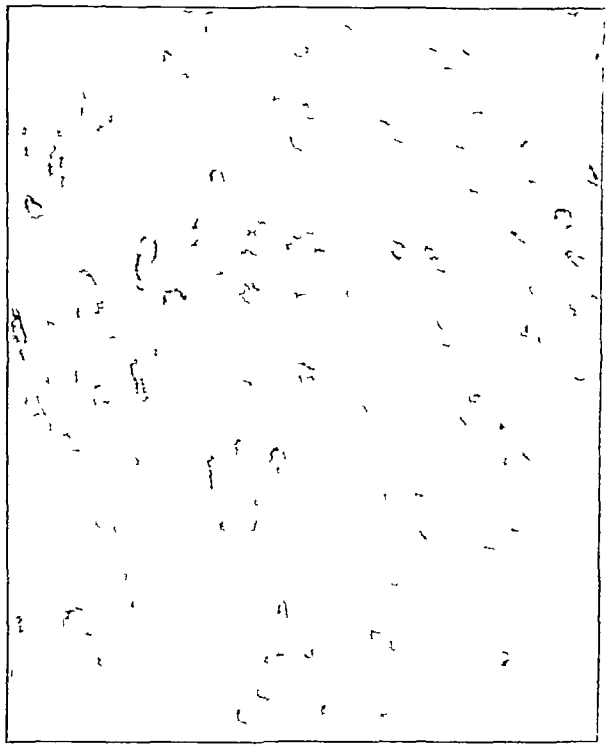


Fig. 2—Drawing of section from specimen Case 2 Magnified 400 diameters.

seriously enough to confine her to bed She has been perfectly well, doing her own cooking, washing, and housework during her first pregnancy, which ended in a natural easy labor, with no physician present, just eight weeks before entering the hospital

Two months after conception she noticed a small hard lump

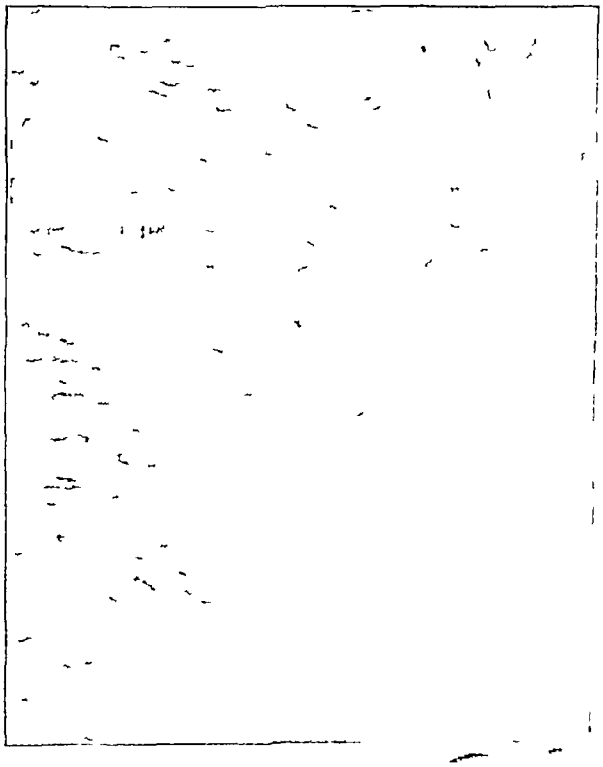


Fig 3—Drawing of section
400 diameters

the size of a Malaga grape, painless and slightly movable, in the left inguinal region It did not interfere with her daily work, and did not cause her any inconvenience whatever until after her baby was born, when, in the subsidence of the abdomen, it was not only very apparent, but began to grow rapidly, until it attained its present considerable size

Physical Examination—A hard, globular tumor was found about the size of child's head at birth, apparently occupying the right inguinal canal It was freely movable, with smooth round surface, and was not attached to the uterus or the ileum There was no pulsation or bruit and no enlarged inguinal nodes, nor was there any evidence of hernia

Operation—The thinned fibers of the external oblique were slit, and the tumor quickly hulled out of its bed in the canal. There was no pedicle It seemed to have developed in the canal The wound was closed as in Bassini's operation for hernia, for both the floor and roof of the canal were stretched to extreme thinness, requiring lapping of the external fascia and suturing to the right rectus

Post Operative Course—The patient made an uneventful recovery and has since given birth to another child in a labor easier than the first, and unattended by a physician. At this time, three and one-half years after the operation, there has been no return of the growth, and her general health has been excellent

Gross Appearance of Specimen—The tumor was smooth and free from nodules and distinctly encapsulated. It weighed between 2 and 3 pounds, and was white in color Section revealed a plane, white surface, with no cysts or pockets of fluid The blood vessels were few in number and small in size, but all presented well defined walls

Microscopic Appearance of Specimen—The structural elements and their arrangement proclaimed it a fibromyxoma The connective tissue cells were scattered without plan through a matrix consisting of myxomatous material, through which a tangle of tiny fibrils was interwoven The preponderance of matrix over cells at once attested the benign character of the growth As will be seen in Figure 1, the spindle was the prevailing type of cell, with thread like tapering ends characteristic of myxomatous tissue The field shows no blood vessels, but in other areas vessels were noted, always with well defined walls

CASE 2—Referred to St Luke's Hospital by Dr J P Roy of this city and operated on by Dr Stuart McGuire.

Patient—Mrs S E G, aged 26, married Family history negative.

Personal History—Had the mild diseases of childhood. Has two children, the youngest 2¼ years old Menstruation always normal Never did hard work or heavy lifting, or had a chronic cough that might cause hernia Trouble dated from three years ago, when she first noticed a sharp pain in the left groin, and on examination found a small lump, which gradually increased in size The local pain had persisted and increased in severity, especially in damp weather She had also suffered occasional paroxysms radiating from the inguinal region over the lower abdomen and into the back. These were sometimes brought on by long walks or long standing The tumor was uninfluenced by menstruation, and had never become inflamed, nor had it interfered with urination It did not decrease in size on lying down, and did not affect her general health

Physical Examination—In the left groin, above Poupart's ligament, was a mass about the size of the closed adult fist, oblong in shape, and directed downward and inward Over the mass the skin was freely movable The veins of the skin were slightly engorged, but not markedly so On palpation the tumor was hard and somewhat elastic in consistency, and could be slightly moved It was clearly outlined, and seemed to have an attachment to the outer wall of the pelvis There was no pulsation or bruit. About the anterior superior spine of the ileum there was marked tenderness

In the region of the external abdominal ring, when the patient stood erect a small lump about the size of an almond was seen which disappeared when she was on her back. With a finger in the ring an impulse was felt on coughing, which was not noticeable elsewhere on the tumor Percussion over the large tumor elicited a partially dull, but not a flat note Heart, liver, lungs, spleen, etc, were normal

Diagnosis—Tumor of left inguinal canal, apparently attached to crest of ileum, probably osteosarcoma Complication Left incomplete indirect inguinal hernia.

Operation—The thinned external oblique was slit up from the external to the internal ring, and the tumor exposed It was firmly adherent to the fascia, and was attached by a broad pedicle to the inner aspect of the ileum What was thought to be a hernia was found to be the cystic lower end of the tumor It was hulled from its bed and its pedicle stripped away from the ileum There was much bleeding from many thin walled veins, this was readily controlled by pressure.

There was far more suggestion of malignancy about this case than in the preceding, both as to its bleeding and its firm periosteal attachment Closure was effected as in Case 1, by uniting the cut external oblique to the border of the rectus over the approximated conjoined tendon and Poupart's ligament. The wound was drained by a stab wound, behind and below the anterior superior spine of the ileum

Post Operative Course—The wound drained very freely, but united without pus formation Patient made a good recovery, and at the present writing there has been no return of the growth

Gross Appearance of Specimen—An oblong mass, firm in consistency, with several loculi of clear fluid at the lower extremity Section showed a firm surface, with many well defined vessel walls

Microscopic Appearance—In Figure 2 it will be seen that the intercellular structure is greater in amount than the cells, though the cells are far more numerous than in Figure 1 The matrix is of the same character as seen in Figure 1, but the cells, while still retaining the spindle shape, are shorter and more rounded at the ends Vessels, where found, had well defined walls

CASE 3—Seen at the Virginia Hospital, with Dr M E Nuckols, April 4, 1906

Patient—Negro woman, aged 23, with one child 3 years old Family history negative

Personal History—Regular menstruation Eighteen months ago a small tumor appeared in the left inguinal region and grew slowly and painlessly until a few days ago, when she began suffering with an aching pain in the region, which led her to seek relief

Physical Examination—A large, firm somewhat oblong rounded tumor of the left inguinal canal, extended from the crest of the ileum beyond the median line It was quite movable, though apparently attached to the ileum externally It was not attached to the uterus, gave no bruit on auscultation, nor any impulse on coughing

Diagnosis—Myxomatous tumor of the left inguinal canal

Operation—This was performed by Dr Nuckols just as were the foregoing The tumor was easily separated except at its pedicle, which sprang from the periosteum over the anterior superior spine, from which it had to be torn Care was taken to take a portion of the periosteum away with the pedicle, as the tumor was quite vascular, and had rather an ugly look Repair of the canal was effected as in the two foregoing cases

Post Operative Course—Uneventful recovery Case lost sight of since leaving the hospital

Gross Appearance of Specimen—Firm, smooth, oval tumor, weighed 3½ pounds, presented a uniform interior, free from cysts

Microscopic Appearance of Specimen—As seen in Figure 3, the cellular elements, while more numerous than in either Case 1 or Case 2, still constitute less of the tisssue than its intercellular substance The intercellular substance consisted of myxomatous material and fibrils like the foregoing The prevailing type of cell here was also the spindle, though larger than the foregoing

SUMMARY

These tumors occurred in women between the ages of 19 and 26 All three had borne one or more children, and in one at least pregnancy seemed to accelerate the growth Two of the growths sprang from the perios-

ileum or fascia covering the inner face of the ileum, while one lay free in the canal, attached only to its coverings All were of comparatively rapid growth, the average duration from the earliest detection to the time of operation being 22 months

The growth was most rapid in the younger women The smallest tumor was the oldest growth, occurring in the oldest woman All were probably fibromata, which underwent myxomatous degeneration, and the first two were distinctly benign in appearance, but the size and appearance of the cells in Case 3, coupled with the proportion between the cells and the matrix, is suggestive of that strange borderland type which is so perilously near to sarcoma

1000 West Grace Street

TURNIP TOP TREATMENT OF CHRONIC DIARRHEA AND AMEBIC DYSENTERY

CUNNINGHAM WILSON, M.D., AND H. E. PRESSLY, M.D.
BIRMINGHAM, ALA.

Nothing has given more concern than the treatment of chronic diarrhea and dysentery In reporting our experience in the treatment of such conditions with the boiled tops of the turnip, spinach, mustard and phytolacca we feel fully convinced of the specific action of this diet, and append the report of some cases so treated Our attention was first called to this treatment during 1904 in the following manner A patient, male, white aged 28, consulted us for a chronic diarrhea He had suffered for several months and had tried the various astringent and dietetic remedies commonly employed in such conditions He was pale, had lost in flesh, had four to six stools a day with very little pain The stools were chalky in color, semi-solid and very offensive We advised him to go into a hospital, where he was put on rigid milk diet with astringent enemata He grew worse, and his diet was changed to cereals and meat juice On this he was kept for six weeks without much trouble, but gained nothing in weight nor strength In disgust he left the city and went home, as we supposed, to die, certainly rest in bed and the hospital régime had not benefited him Some months later he walked into our office a well man He had gained largely in weight and had the appearance of perfect health When we inquired for the cause of his recovery, he replied "Poke salad" (phytolacca top) He had begun, shortly after leaving the hospital, to eat cooked sprouting tops of phytolacca and, when these could not be obtained, turnip tops, mustard or spinach, with the result stated We watched this man for some time and saw him return to his regular work, bridge builder We lost sight of him after a year, but have lately learned that he has died, from what cause we do not know We have prescribed turnip or mustard "greens" in four cases of chronic diarrhea since this, and in every case the result has been most satisfactory The diet at first should be rigidly "greens" and later cereals, as they can bear them Meat seemed to be the hardest thing for our patients to digest

We are giving the reports of six cases four of chronic diarrhea and two of amebic dysentery Of the patients with diarrhea one has died

CHRONIC DIARRHEA

CASE 1.—An old lady who had a severe chronic diarrhea had all her symptoms relieved on the "greens" diet and went to the country for a change While away it was impossible for her to get the diet, she had a relapse and died after six weeks in bed

CASE 2.—Mr. A., aged 40, white, married, real estate agent. First noticed diarrhea January, 1905, until June, 1905 had irregular diarrhea, alternately better and worse Had been put on a low diet with bismuth, but on the whole was losing ground, and the diarrhea continued June 1905, he began taking "turnip greens" almost exclusively for four months, improvement was prompt and he soon began to gain in strength and weight The diarrhea was controlled at once It is fair to say that for a while he took a mixture of chalk and bismuth In a letter received from him to day he states that he gained 10 pounds on this strict diet and he now eats anything, and has gained 15 pounds more 25 pounds in all.

CASE 3.—Male, white, aged 45, railway conductor First noticed diarrhea in March, 1902 His stools numbered from four to twelve a day, keeping up throughout the twenty four hours, they were semi solid, frothy, pale chalky in color and of extremely offensive odor There was no jaundice nor pain but a great deal of gurgling in the bowels He stated that milk always aggravated his symptoms For twelve months he was sick this way, sometimes apparently improved for a day or two, only to relapse and find himself weaker than before During this time he was able to work on an average one third his regular time He was continuously under medical care In February 1903, he began taking "turnip greens" He ate them exclusively for two weeks, and improvement began at once, even though he was taking no astringents After two weeks his diet was gradually enlarged until at the end of two weeks he was on full diet During this period he gained 30 pounds and felt well and strong He now eats anything and is not troubled in the least, he occasionally eats the salad, but not systematically

CASE 4.—Mrs. M., white aged 65, first noticed trouble in the fall of 1903 Stools numbered from four to twelve a day, usually more trouble in the morning Movements were pale yellow, semi solid, frothy and very offensive There was no jaundice Milk always aggravated the symptoms She endured this for eighteen months taking the usual remedies with periods of temporary improvement, followed by relapses In June, 1905, she began taking "turnip greens" and took them exclusively for three days and almost exclusively for six weeks During this period she improved steadily, the diarrhea was controlled and she gained materially in weight and strength She is still eating "greens" and with them anything else she wishes Her health is entirely regained and she is as strong as she ever was Weight on beginning treatment, 115 pounds, weight to day, 148 pounds

These facts have been obtained from the patients living to-day we regret the incomplete record of the fatal case Of the five patients all but one had symptoms that closely resembled tropical sprue, the tongues were red and bare of epithelium, there was great weakness and pallor, with pale, semi-solid, frothy stools, but all did badly on milk None of these cases had bloody stools

Our experience with this diet in amebic dysentery though limited, is most satisfactory The two patients had tried all the ordinary remedies and the first was ready to undergo an appendicostomy or an enterostomy He had quinin and nitrate of silver irrigations, rest in bed carefully restricted diet, and, in fact, had carried out every detail of directions given him, and his condition was extreme The patient in the second case was not so bad but he had given up his work and did not expect ever to return to it He had been in the hands of good physicians and we lost no time in putting him on "turnip greens" You will note the result in the report of the case below

AMEBIC DYSENTERY

CASE 1.—White, aged 29, married, merchant, was first seen Oct. 28, 1905 He gave a history of having had an attack of dysentery in 1901 lasting three months and from which he seemed to recover He had [illegible] required

mer weight by fifteen pounds In July, 1905, the dysentery returned with bowel movements of from three to ten daily He was very pale and thin, the skin was dry, abdomen soft and slightly tympanitic, with tenderness extending from cecum over the entire colon The bloody mucus, removed with rectal tube, was loaded with amebæ. None of the ordinary remedies had any effect on him, in fact, he grew steadily worse From our experience in the diarrhea cases, he was put on "turnip greens" and his improvement began at once In a month he had gained in strength and flesh to a remarkable degree He was required to keep up irrigations of normal salt solution, but all other treatment was discontinued By the end of the second month he was entirely well, he reports occasionally to show that he continues well, and he is able to take any kind of food

CASE 2—C A., white, aged 30, locomotive engineer, was seen Oct 8, 1906, and stated that on Jan. 6, 1906, he began to have bloody mucus discharges from his bowels, he was able to continue work most of the time until July, 1906, when he had to take to his bed He was able to be up part of the time, but would often have from eighteen to twenty bowel move ments a day His appetite was ravenous There was a great deal of tenesmus and he was very thin and anemic, examina tion of the chest was negative, there was some tenderness over abdomen Bloody mucus removed from rectum showed abundance of amebæ He was put on "turnip greens" at once, of which he would take four or five meals a day, at the end of two or three days he was entirely relieved of his tenesmus, and the bowel movements were becoming much less frequent. He was kept in bed most of the time for the next month, tak ing nothing but "turnip greens" for the first two weeks, when he began to increase his diet by the addition of a glass of milk and a little toast November 15 he began to lose his appetite, his skin looked thick and his tongue was heavily coated, he was given 1/10 gr calomel three times daily He thought this did him a great deal of good and he kept it up for two weks December 1 he returned to his work and is now as well as ever

It may be as well to add to this report the fact that we have recently seen two patients suffering from well-defined stomach ulcers take this food when everything else disagreed One has, to all appearances, recovered He was extremely weak when he began the diet, having just had a severe hemorrhage from his stomach He could take this food without pain or inconvenience and is now entirely free from symptoms and in better health than he had been for years The other case was reduced to the last extremity when he was given this diet It caused him no pain and he took it with a relish, while he was unable to take any other food without great pain He died from exhaustion

It may be well enough to speak of the preparation of "turnip greens" It is a common diet all over the South, especially in the country districts The tender young sprouts of the common poke (phytolacca) are also used in the same way among the negroes and poorer classes The cooking is of great importance, as the dish is most unpalatable when badly cooked In the preparation of the turnip greens, ordinary bacon is used which is boiled about half an hour and then the turnip tops, spinach, mustard or phytolacca tops are added and let boil from one to two hours

MATERNAL IMPRESSIONS

J W ROBINSON, M.D
M'CAMMON, IDAHO

The article and discussion on "Superstition in Teratology" in THE JOURNAL, Jan 26, 1907 prompts me to report the following case, as I believe that only collection and comparison of statistics in addition to careful study of cases will clear up the subject

Patient—Mrs T, aged 36, American, white, mother of five children

History—The youngest child is 4 years old At the age of eighteen months it suffered from what was evidently anterior poliomyelitis, but had no medical attention Before the at tack the child was able to walk, but following the attack it was unable to do so Six months later the parents consulted a physician who diagnosed the trouble as "hip disease" He did little in the way of treatment, and did not help the child any Examination of the child in November, 1906, by Dr W F Howard and myself, showed a talipes equinovarus of the left foot. Measurements showed one inch shortening from the anterior superior spine of the ileum to the internal malleolus. The left calf was one inch smaller than the right Appropriate treatment was instituted

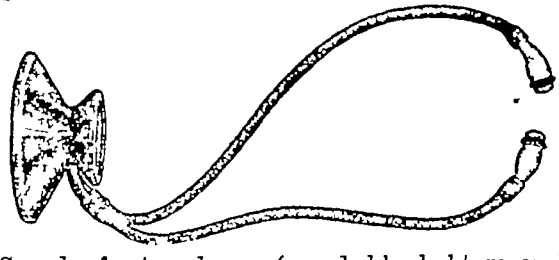
In November, 1906, I was called to attend Mrs T in labor at term The child was a healthy male, but with well marked talipes varus of the right foot This was easily reduced, but returned almost immediately One month later I over cor rected it and held it in place with a plaster cast.

The mother had worried very much over the possi bility that the child might have a deformity similar to that of her other child Whether the occurrence of the deformity is a mere coincidence or not I do not know nor claim to explain

DUPLEX STETHOSCOPE

P A. AURNESS, M.D
MINNEAPOLIS

This instrument consists of a metal shell, forming two focalizing sound-wave receivers having a common central body and sound-exit. An adjustable hollow plug attached to flexible transmission tubes permits the use of the larger or smaller receiver simply by half turning the plug As made for me by the American Rubber Company, Minneapolis, the receivers, covered by a drum membrane, are of a metal composition (copper, zinc and lead), found very dead to air vibration—a feature of importance in the transmission of pure chest sounds and in the elimination of instrument vibration or the auto-adventitious noises commonly found in instruments of this kind



Sound-refractory lenses (sound, like light-waves, be ing subject to refraction), adjusted so as to focalize the sound-waves at the sound-exit, make the instrument one of unusual sensitiveness and accuracy The flexible tubes, wound around the neck of the instrument, permit it to be conveniently carried in the vest pocket, occupying only the space of an ordinary watch The ear tips are made to fit the auditory canal by a sliding, adjustable rubber ring in order to more effectively exclude disturbing sounds

The objects attained in the design of this instrument are superior efficiency combined with simplicity of style and construction

Cause and Effect—Don't think you can sow the seeds of disease and reap a crop of health The books of Nature are squared occasionally and full account is exacted for every item—*Journal of the Outdoor Life*

New and Non-Official Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NON-OFFICIAL REMEDIES" THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY

(A list of all accepted articles is published on one of the advertising pages of The Journal in the first issue of each month)

(Continued from page 421)

VIOFORM

NIOFORM IODOCHLOROXYQUINOLIN

Vioform, $C_9H_4N\,OH\,I\,Cl = C_9H_5ONClI$, is a substitution compound of anachlor-orthohydroxy-quinoline, resulting from the introduction of one atom of iodine

Hydroxy-quinoline is first chlorinated and dissolved in an alkaline solution which is then treated with a solution of iodine in potassium iodide when a voluminous yellowish brown precipitate of vioform is produced. This is washed with a solution of sodium thiosulphate to remove free iodine and then with 1 per cent. hydrochloric acid until the dried residue melts at from 170 to 175 C. (338 to 347 F.)

It is a very voluminous, greenish yellow powder, crystallizing from glacial acetic acid in needles melting at 177 to 178 C. (350.6 to 352.4 F.), practically odorless, and insoluble in water and slightly soluble in alcohol; it permits sterilization without decomposition. It is about six times as bulky as iodoform.

Vioform contains 41.57 per cent. of iodine—it gives a green coloration with Millon's reagent or when the alcoholic solution is treated with ferric chloride solution. It dissolves with a brown color in concentrated sulphuric acid and the solution evolves iodine on warming. If this solution after driving off the iodine be diluted with water, chlorine can be demonstrated by the usual test with silver nitrate. If a solution of vioform in chloroform is shaken with nitric acid, the chloroform acquires a violet red color and the nitric acid becomes somewhat yellow.

Actions and Uses—It is antiseptic, haemostatic, cicatrisant, non-toxic and non-irritant. It is claimed to be an ideal substitute for iodoform, preventing decomposition in wound secretions to a much higher degree, and drains and tampons may be left *in situ* for a considerable time.

Dosage—As dusting powder, and as ointment, spray, suppository, or in form of gauze (which see).

Manufactured by Baseler Chemische Fabrik, Basel, Switzerland (C. Bischoff & Co., New York). German Patent No. 117,707.

VIOFORM GAUZE

Gauze impregnated with a solution of 10 Gm. (150 grains) of vioform, 50 Gm. (750 grains) of absolute alcohol, 10 Gm. (150 grains) of sugar, 25 Gm. (375 grains) of glycerin and 500 Gm. (1 1/12 pints) of water.

Actions and Uses—See Vioform.

Manufactured by Baseler Chemische Fabrik, Basel, Switzerland (C. Bischoff & Co., New York).

CELLOIDIN

A name applied to a preparation of the character of a purified Pyroxylin, U. S. P.

Celloidin is prepared by solution of pyroxylin in a mixture of alcohol and ether, filtration and recovering the solvent from the filtrate. It is supplied in shreds immersed in water.

Manufactured by Chemische Fabrik auf Actien vorm. E. Scher ing, Berlin, Germany (Schering & Glatz, New York). U. S. patent No. 299,857.

COMPOUND EMULSION PETROLEUM S. & D.

An emulsion containing 5 per cent. of refined petroleum and 28 1/3 per cent. petrolatum oil with 0.6 Gm. (10 grains) of calcium hypophosphite and 0.6 Gm. (10 grains) of sodium hypophosphite in each 30 Cc. (one fluidounce).

It is a white emulsion practically free from odor and taste.

Actions and Uses—It is claimed to be a stimulant, diaphoretic and expectorant.

It is claimed to be useful in catarrhal affections of the respiratory tract.

Dosage—8 to 16 Cc. (2 to 4 fluidrams) three times a day.

Manufactured by Sharp & Dohme, Baltimore, Md.

DUOTAL-HEYDEN

A name applied to Guaiacolis Carbonas, U. S. P.

Manufactured by Chemische Fabrik von Heyden, Radebeul near Dresden, Germany (Schering & Glatz, New York). U. S. patent No. 466,913. U. S. trademark No. 28,957.

ESSENCE OF PEPSIN-FAIRCHILD

A solution of the milk-curdling and proteolytic ferments of the gastric glands in a menstruum containing 18.5 per cent. of alcohol by volume.

The solution is prepared by direct extraction from the peptic glands of the stomach.

One Cc. will curdle 250 Cc. of milk at 38° C. in a few minutes and dissolve 25 Gm. of coagulated egg albumin when tested according to the directions of the United States Pharmacopeia.

Actions and Uses—Essence of pepsin has the action of rennin and of pepsin and is recommended by the manufacturers for preparing milk for ingestion and in cases in which pepsin is indicated.

Dosage—4 Cc. (1 fluidram) or more.

Manufactured by Fairchild Bros. & Foster, New York.

FIBROLYSIN

Fibrolysin is a sterilized solution of a double salt of thiosinamine and sodium salicylate ($NH_2\,CS\,NHCH.\,CH\,CH$) + $C_6H_4(OH)\,(COONa)$, containing 15 per cent. of the double salt.

It is prepared by mixing the two components in solution. It is an aqueous odorless solution. It does not keep well in the air but is marketed in sealed brown glass vials each containing 2.3 Cc. (37 minims) of the solution equivalent to 0.2 Gm. (3 grains) of thiosinamine.

The tests are those of thiosinamine and sodium salicylate.

Actions and Uses—Those of thiosinamine (which see), with the advantage of quicker absorption and freedom from pain or irritation, on account of its solubility and aqueous vehicle.

Dosage—The contents of one vial (2.3 Cc. = 0.2 Gm. thiosinamin) by subcutaneous, intramuscular or intravenous injection, one injection being administered daily or every second or third day.

Manufactured by E. Merck, Darmstadt (Merck & Co., New York). U. S. trademark No. 40,160.

HEMOL

REDUCED HEMOGLOBIN, PARAHEMOGLOBULIN, HEMOGLOBIN DEOXIDIZED BY ZINC, MERCK. HAEMOL

Hemol is an organic iron compound produced from blood by reduction.

Neutralized blood is shaken with zinc dust and water and the zinc removed from the product of the reduction (Zinc paralbumo globulin).

Hemol is a dark brown, almost tasteless powder, in olible in water, alcohol, etc. It contains traces of zinc oxide.

Actions and Uses—It is claimed to have the action of an organic iron compound.

Hemol is claimed to be useful in anemia, chlorosis, etc.

Dosage—0.12 to 0.5 Gm. (2 to 8 grains) in powder with sugar or in wafers.

Manufactured by E. Merck, Darmstadt (Merck & Co., New York). U. S. patent No. 41,022.

(To be continued)

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[For other information see second page following reading matter]

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CERVICAL RIBS

The Bible story of the creation of Eve from one of Adam's ribs is doubtless responsible for the not uncommon impression, even among intelligent laymen, that the male sex normally possesses one less rib than the female Scientific knowledge of accessory ribs dates back to antiquity, and, on account of the fact that they are not only more frequent, but also more easily detected and more apt to give rise to symptoms, most attention has been given to cervical ribs Of recent years, presumably on account of the use of the *x*-rays, cervical ribs have been frequently described, but as yet no extended discussion of the symptoms which they may produce has been incorporated in the average text-book

The accessory ribs are due to errors in development of which we have no certain knowledge The abnormal rib, or ribs, for they are often bilateral, may exist alone, or, as is common with developmental errors, may be associated with other defects, especially with lesions in the spinal cord The manner of their development is easily understood when it is recalled that the normal ribs are merely modified processes of vertebræ, and these same processes in a rudimentary condition are always to be made out in the cervical, lumbar and sacral regions The cervical ribs usually spring from the seventh cervical vertebra, are often bilateral, and may terminate free in the tissues of the neck or articulate with the first rib or the sternum As Barker has shown, all varieties of articulation with the vertebræ and all sorts of shapes and terminations are met When the ribs are bilateral, and the *x*-ray has shown that this is much more frequent than was formerly supposed, one is usually much larger than the other, so that symptoms of cervical rib are usually unilateral

It would be expected that cervical ribs, being congenital, should give rise to symptoms in early life As a matter of fact, this is not the case, most individuals showing no symptoms before the age of 15, while not infrequently the signs first appear late in life This has been explained by the fact that until the rib has reached a certain size it can not exert pressure on important structures Other observers ascribe it to greater fixity of the rib after the period of ossification, and still others to the alteration in relation to other structures due to sagging of the shoulders from lack of muscle tone from advancing age In individuals with arterial changes the effect of age on the arteries must also be considered In any event, it is by no means unprecedented for a lesion to be present for years without producing symptoms, these suddenly appearing coincidently with some condition depressing the general health

The symptoms of cervical rib are admirably analyzed by Keen[1] in a recent article, which should be consulted by all wishing full details on the subject Local symptoms are necessarily present, as the extra rib appears in the neck as a bony prominence, usually one or two fingers' breadths above the clavicle about its center The tumor is usually hard, rounded and immovable, though in some instances slight mobility may be made out Attention has been called by several observers to the unreliability of palpation alone in detecting cervical ribs, and Keen strongly advocates the use of the *x*-rays in all doubtful cases There seems more danger of diagnosing a cervical rib when it is not present than of making the opposite mistake The most important symptoms of cervical rib are due to its anatomic relations with the nerves and vessels of the neck In the individuals who present symptoms, perhaps 10 per cent of those who have the accessory rib, the most prominent are neuralgic pains in the neck and radiating down the arm or to the head or chest Signs of pressure on the lower strands of the brachial plexus are common, and disturbances of sensation in the arm and hand, sometimes of an elective character, are to be expected In a few instances there have been signs of a paralysis of the cervical sympathetic nerve on the side on which the rib was situated The relation of the rib to the great vessels at the root of the neck may also cause weighty complications Aneurism of the subclavian artery has been described, but it seems likely that many cases thus catalogued were not true aneurisms, the fact that the vessel passes over the rib often giving rise to a false impression of dilatation In some cases thrombosis of the artery with gangrene of portions of the fingers has occurred, and more or less impairment of the arterial circulation is common Similar changes may take place in the vein, but edema in such instances seems to be rare Changes in the muscles, in the form of wasting of the arm, and even of the shoulder girdle and chest, on the affected side are seen, and there may be an inability to perform the finer finger movements The subject is an interesting one and though not of paramount importance should be borne in mind in all unilateral painful affections of the neck and upper extremity whose origin is obscure

PROGRESS OF PHYSICIANS' REMUNERATION

In an article in the well-known French magazine *Revue des Deux Mondes* a distinguished French writer on economic and social questions, le Vicomte Georges d'Avenel,[2] discusses the fees that have been paid to physi-

1 Amer Jour Med. Sci., February, 1907

2 Vicomte Georges d Avenel began a course of lectures on Economic History at Harvard University, February 27 He is recognized as the leading French historian.

sicians in France for the last seven hundred years This article is one of a series on the richer classes since the middle ages and is of special interest because it furnishes ideas for the estimation of the comparative amounts paid the different liberal professions, law, medicine and teaching His figures are given in terms of the money of the present day, that is, not only converting the intrinsic value of the gold and silver of that time into terms of modern French currency but also transforming it so as to make it express the buying value of money in our own day

The physician, like the artist, and very often the literary man of the middle ages, could only obtain a definite salary by being attached to the court of a prince or to the domestic circle of a member of the nobility These royal physicians received what would not be considered very good salaries at the present day The physician to Charles the Wise of France, it is true received 22,000 francs, about $4,500, and the medical attendant of the Prince Royal of Aragon about 15,000 francs, nearly $3,000, but these, like the 20,000 francs allowed to the chief physician of the Court of Queen Anne of Brittany at the end of the fifteenth century, were extremely exceptional Practically, salaries ranged from 4,000 to 8,000 francs, that is from $800 to $1,600 The Duke of Burgundy in the thirteenth and fourteenth centuries had two physicians, the first of whom received about $1,500, the second less than $1,200 The Duke of Berry's physician and the medical attendant of Queen Isabelle of Bavaria each received scarcely more than $1,100 Salaries were on the increase, however, for the physicians-in-ordinary and the surgeon of the Archduke King of Spain at the end of the fifteenth century were each allowed $1,400 The Duke of Orleans in the middle of the fifteenth century paid his physician about $900, but then his grandfather a century before had paid his medical attendant only a little more than $300

Most of these physicians had few opportunities of adding to their salaries by attendance on members of the nobility besides their official patrons There seems to have been some objection to physicians devoting themselves to others, as if it did not quite become the physician of a ruling prince to wait also on his subjects These royal physicians, however, often had opportunities to rise in a political way that compensated them for their comparatively meager salaries In daily relations with the ruler they were often asked for advice in other matters besides those relating to medicine, and so became royal counselors The physician of Louis XI Jacques Coictier, became president of the chamber of finance and eventually a millionaire He was able to give Charles VIII two million and a half of francs ($500,000) to enable him to escape from his enemies John de L'Hopital the physician of the Constable of Bourbon, became the auditor of finance in Auvergne and left a fortune to his son who afterward became the famous chancellor

The nearer we come to modern times the more do the remunerations accorded to physicians increase in value During the seventeenth and the beginning of the eighteenth century the various physicians of Louis XIV received as much as 100,000 francs ($20 000) and at least one of them, the famous Aquino, was the recipient for a time of 170,000 francs a year, considerably more than $30,000 Not only did the salaries physicians received increase in value, but the estimation in which they were held also became higher During the preceding centuries they became members of the court in lower places of power, but their professional dignity was not the subject of much respect The famous Vicq-d Azyr however, the physician of Louis XV, not only received a large salary, but was looked on as a distinguished scientist and associated on a footing of equality with the encyclopedists

By this time another important change had come over the public attitude toward the profession The better classes generally had not cared before this for the attendance of a physician who also waited on the poor Now they began to seek especially those whose experience among the poor in the hospitals fitted them better for the successful practice of medicine

With this the modern era begins and the physicians remuneration continues to go up At the present moment there are in Paris, according to the writer of the article referred to, at least a half score of surgeons who make more than $100,000 a year While physicians are not as a rule paid so well as surgeons there are at least as many medical specialists who receive more than one-half this amount annually There are about forty leaders in medicine who make between $20,000 and $30,000 a year,, that is as much as the chief physicians of the Great Monarch two centuries ago, eight times as much as the royal physicians four centuries ago and from twenty to twenty-five times as much as the queen's physician of five centuries ago The outlook for medicine as a lucrative profession in France is most promising but for the one fact that the number of physicians has more than trebled during the last half century while the population of France has only increased one-tenth

This is the danger of professional degeneration—that the numbers shall become so great as to make the proper maintenance of professional dignity impossible Here it may be said is the problem that many nations are facing at the present moment our own country included

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MEDICAL EDUCATION AND THE STATE

Medical education to day is in entirely different problem from what it was twenty five years ago The expenses connected with a thoroughly equipped modern medical college have at least quadrupled during the last quarter of a century Such schools can not be main

tained by the fees that medical students are able to pay Considerable though the income from this source may be, the actual *per capita* cost of a good medical education, everything considered, far exceeds the fees paid in by the student. No one at all familiar with the actual situation will take exception to these general statements Their truth may be taken for granted.

Medical education here, as well as everywhere else, consequently depends on private endowment and state aid for adequate support. Were it not for this support medical education in this country would be doomed to remain at a shamefully low standard and medical research would suffer unmeasurable harm The heaviest sufferer would be the public Munificent though the private endowments to the cause of medical education have been in the past, and hopeful as the outlook is for further aid in the future from this source, the state is not released from all responsibility on this score Many states in the Union have recognized this fact and medical departments have been organized, in some instances many years ago, in other instances recently, in connection with the state universities Michigan, Minnesota, Iowa, Virginia, California, Texas and many other states are fully committed to this policy Wisconsin has just embarked on the interesting scheme of providing on a true university basis for the first two years of medical work, the student to secure his clinical training where he may choose, but with the privilege of returning to the university for his final degree if he sees fit to do so and complies with certain regulations To the friends of progress in medical education this step is a welcome one because it means the annual appropriation by the state of a considerable sum of money to instruction and research work under especially favorable conditions in the branches fundamental to clinical medicine

In another state, namely Illinois, which already is committed to the support, at least in some measure, of medical education in connection with its university, an earnest effort is now under way to place the medical work on a firmer footing and wholly in the hands of the university If the present plans are carried to a successful issue the University of Illinois will come into possession of the commodious and conveniently-located buildings which it now rents of the original College of Physicians and Surgeons in Chicago, the corporate existence of which institution then ceases To this end the university has asked the legislature of Illinois to appropriate $386,000 The plan has the approval of the deans of the two large rival schools of high standing in Chicago and of influential medical men throughout the state generally Its realization is in every way desirable because it will enable a powerful state university, the trustees and president of which have high ideals, to enter into immediate and efficient co-operation with leading schools in raising the standards of medical training and in the promotion of medical research.

Movements like this which look to the support of medical education by public means should be promoted by the intelligent physician within his own special sphere of influence It is important and necessary that the proper attitude toward medicine should obtain among the various classes of people For when the people of our state realize the value to the community (and to mankind in general) of an active, progressive medical science in their midst there will be less difficulty in securing proper support of medicine in our state universities and in other ways

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QUALIFICATIONS NECESSARY IN THE USE OF WRIGHT'S OPSONIC THERAPY

The treatment of various infections, especially chronic, according to Wright's method by means of sterile vaccines prepared from the corresponding microbe, is attracting much attention in the English-speaking medical world In the hands of experts the method seems to achieve results that promise well for a degree of permanent future usefulness On account of the exact laboratory method of procedure vaccine therapy for a long time to come must remain in the hands of those that are especially qualified to carry it out. Probably a brief exposition of the difficulties—at present in most cases insuperable—in the way of the general practitioner's himself taking up this treatment, may not be without interest.

It must be borne in mind that Wright bases the treatment on the consideration that in many localized, chronic infections bacterial products may fail to reach the circulating blood in sufficient quantities and at proper intervals to stimulate adequately the machinery of immunization or self-healing and that it is in order to supply the necessary stimuli in proper doses that sterile vaccines prepared from the particular microbe causing the infection in question are injected Hence it becomes absolutely necessary that an exact etiologic diagnosis be made in all affections that it is proposed to treat with specific vaccine therapy The use, for instance, of gonococcus vaccine in the treatment of a chronic streptococcus or pneumococcus arthritis would be a fundamental mistake

In the next place in order that the vaccine may be the one most suited for the individual case it is regarded as highly desirable, and even essential, that the vaccine be prepared from the particular strain causing the infection This involves the isolation in pure culture of the bacterium in question, the preparation therefrom of sterile, potent vaccine, the proper dose of which is to be determined by special methods Eventually we may learn that certain stock vaccines may be used with satisfaction, as now is the case in regard to tuberculosis in the vaccine treatment of which Koch's new tuberculin is employed

Finally, in order to determine the immediate effect of the vaccine and to interspace the injections properly it

is necessary that the way in which the body reacts to the combined effects of the injections and the infection be tested from time to time This is now done by determination of the opsonic index, a procedure that requires special facilities, some skill and much time There is good reason to believe that persistent, ill-timed injections of vaccine, without giving the patient time to recover from the primary depression of the antibacterial powers that follow after each injection, may do great harm, and it is in order to avoid this, as well as to obtain direct evidence that the vaccine actually does stimulate the apparatus of immunization, that it is essential at least in the present stage of our knowledge to estimate the opsonic index

The only infection in which an exception to this might be made would seem to be chronic local tuberculosis, provided the doses of tuberculin are small (1/1000 mg by weight of bacillary substance) and the intervals between the injections 10 to 12 days Clinical experience with tuberculin in the hands of careful, critical observers like Trudeau before the days of opsonins indicates that this would be a safe course

It is evident that for the reasons briefly outlined vaccine therapy for the present must be delegated to specially trained persons with adequate facilities such as may be supplied in connection with laboratories Already a number of special services of this kind have been established in this country, and it is by the accumulation of a substantial body of facts through painstaking and discriminative observations by competent persons in various places that the more precise field of usefulness of vaccine therapy and the best mode of its practical application within that field eventually will be determined

CANCER CACHEXIA

Up to the present no satisfactory explanation of the characteristic cachexia of cancer patients has been furnished Although occasionally some one has reported the occurrence of "ptomains" or similar substances in the urine, these observations seem to have been either inaccurate or without significance, and generally both Repeated examinations of tumor tissues have also failed to demonstrate the presence of any characteristic toxic substances that might account for cancer cachexia Perhaps the most reliable positive finding is the frequent but by no means constant hemolytic property of extracts of cancer tissue, which might account in part for the anemia common in cancerous patients, but the typical cancer cachexia is something more than merely an anemia

In spite of this paucity of positive findings, it is easy enough to imagine sources from which cachexia-producing poisons might arise and the chief marvel is, perhaps that more positive results have not been obtained For example, it is quite probable that cancer cells, like all other tissue cells, produce by their metabolism substances which enter the general circulation, these substances might readily cause systemic disturbances either because of their abnormal nature, or, if of the same nature as the products of normal cells, because they are present in abnormally large amounts Again, the constant disintegration of the cancer tissue through necrosis and subsequent autolytic softening must lead to the entrance of the products of proteid destruction into the blood But it has not yet been possible to demonstrate that poisonous substances which might cause such a condition as cancer cachexia do arise in either of these ways

With the foregoing facts in mind, it is interesting to observe the iconoclastic stand taken by Hansemann in his address delivered at Lisbon[1] on the subject of the functions of tumor cells He recalls the numerous cases of cancer in which there is no cachexia, or in which the cachexia does not appear until shortly before the death of the patient, although the cancer may have existed for years, e g, the carcinomas of the face which often exist for ten or more years, as well as many instances of uterus or mammary gland carcinoma After an analysis of many cases, he has come to the conclusion that cancer, *per se*, does not cause cachexia The anemia and emaciation he believes, are due to associated conditions, for he found a pronounced cachexia only when the cancer either involved the digestive tract or was extensively infected and ulcerated, or else when the function of many organs was disturbed by metastatic growths

Coupled with the consistently negative findings of all those who have recently sought for evidence of a special poison as a cause of cancer, these observations of Hansemann, based on his exceptionally rich experience in tumor biology, must go far to expel the notion that cancers are of themselves a cause of cachexia In view of the frequency with which "absence of cachexia is brought forward in weighing the evidence as to the existence or non-existence of cancer in a doubtful case the relegation of cancer cachexia to its proper place as a result of late changes in the malignant growth will undoubtedly be a step forward in the "early diagnosis of cancer," toward which as a sort of therapeutic millenium we all look

OSTEOPATHIC LEGISLATION

The attention of secretaries of state boards of health, presidents and secretaries of state societies members of the committees on medical legislation and of all our readers who are interested in this subject is called to the systematic organized effort which is being made on the part of osteopaths throughout the United States to secure favorable and uniform legislation in every state

Bills have been or are being introduced in all the states in which the legislatures

1 Zeitschrift für

have not already adopted such laws These bills are practically identical, not only in provisions, but in several instances in actual verbiage Profiting by the experience of the medical profession in the matter of state licensure, the framers of this bill (for there really is but a single bill) have provided, not only that all persons practicing osteopathy in the state at the time of the passage of the bill shall be exempt from examination, but also that "to all persons authorized to practice osteopathy in any other state or territory shall be issued a certificate to practice osteopathy on the presentation of a certificate of license issued after examination by a legally constituted board of such state or territory or, any osteopathic physician who has been in the actual practice of osteopathy for five years, who is a graduate of a reputable school of osteopathy, and who may desire to change his residence to this state shall be licensed without examination" This provision has already been adopted in thirteen states

In a word, a systematic effort is being made to put through the legislature of every state a bill, establishing a separate board of osteopathic examiners, which board is not only empowered but instructed to issue a license to practice osteopathy without examination to any one who may hold a license in any other state In a few of the bills introduced some slight modifications have been made, but the main provisions are practically the same The wording of the sections referred to in the bill which passed the West Virginia Legislature is absolutely identical, word for word, with that of the bill now pending in the Oregon Legislature This remarkable coincidence may be due to thought transference or unconscious assimilation, but most of our readers will explain it by assuming the existence of a guiding hand and of an organized effort to secure, for these manipulators, rights and privileges which the medical profession has never been able to enjoy We shall have more to say on this subject, but we voice this warning to all who are interested in safeguarding the health of the people and upholding the standard of education required by those who assume to treat the sick

LEGISLATION PROBLEMS

It is often a wonder to the layman that errors creep into laws in spite of the study given to their phraseology by eminent lawyers But the slips are no more strange than the medical blunders which physicians sometimes pass over A "patent medicine" law was passed in Massachusetts in 1906, which provided that there should be stated on the wrapper the amount of alcohol in such medicines, if "in excess of the amount shown to be necessary by the U S Pharmacopeia or the National Formulary as a solvent or preservative of the active constituents of the drugs contained therein" This highly illuminating provision might be a "joker" introduced into the bill by farsighted "patent medicine" proprietors, because neither the U S Pharmacopeia nor the National Formulary contains any statement of the amount of alcohol necessary to dissolve or to preserve the active principles of any drug The "excess," therefore, is an indeterminate quantity Moreover, in the case of some nostrums whose active constituent is alcohol itself, the problem resolves itself into a *reductio ad absurdum* Massachusetts legislators are endeavoring now to amend the law so that it will conform to the national Food and

DR. CARROLL'S PROMOTION

As will be noted in another column, James Carroll, of the U S Army Medical Department, has been recommended, by special Act of Congress, for promotion to the grade of Major This, as our readers know, is a recognition of his self-sacrificing labor in connection with the experimental work on yellow fever While a tardy one, this is an act of justice, and Congress has done only what it should have done long ago It is proof that republics are not always ungrateful It is not unusual for some heartburning, discontent and charges of unfairness to be engendered when, on account of important services rendered, an officer has been advanced in rank over others who have served long and faithfully But in the case of Dr Carroll's preferment it seems that the entire medical corps of the Army, as well as the officers of the other branches of the service rejoice at the advancement, recognizing as they do his single-mindedness, modesty and ardor in his chosen line of work

Medical News

ALABAMA.

Medical Society Meeting—At the annual meeting of the Bullock County Medical Society, held in Union Springs recently, the following officers were elected President, Dr James L. Bowman, Union Springs, vice president, Dr W H Sellers, secretary, Dr Charles M Franklin, Union Springs, and treasurer, Dr Thomas J Dean, Union Springs

Personal—Dr Clement Ritter, Selma, was thrown from his buggy in a runaway accident, February 25 injuring his back and left knee.——Dr Frank H Dennis, who has been ill at the Providence Infirmary, Mobile, for a considerable time, has sufficiently recovered to take a trip to Texas

ILLINOIS

Communicable Diseases—On February 27 Jacksonville had 7 cases of smallpox with 5 foci of infection——Rockford reports a severe epidemic of influenza——Scarlet fever at the Girls' Home, Geneva, has apparently taken a new start, 41 cases in all having been reported.

Clinics in Insane Hospitals—The resolution of Speaker Shurtleff against holding clinics in the state insane hospitals was adopted unanimously by the House Committee on Appropriations February 22. This is said to be a purely political measure directed against the governor and physicians throughout the state express themselves as indignant that the privilege of instruction which is given at other state institutions by observation of patients should be withheld at the hospitals for the insane, where most valuable results might be attained

Coroner's Report.—During February the coroner of Cook County investigated 341 deaths, 42 less than the preceding month and 77 less than for the corresponding month of 1906 Of the deaths 156 were due to natural causes and 185 to violence Falls caused 26 deaths, suicide, 25, railroad accidents, 22, burns and scalds, 18, street-car accidents, 16 homicides 14, explosions and asphyxiations, each 13, alcoholism, 10, criminal operations, 9, poisoning, 3 and exposure, 2 Of the 25 suicides 9 were due to carbolic acid and 7 to gunshot wounds

Osteopathic and Optometry Bills—The osteopathic bills, noted in THE JOURNAL of February 9, are still in the committees to which they were referred, viz., House bill No 66 in

House Committee on Miscellaneous Subjects, and Senate bill No 21 in the Senate Committee on License and Miscellany These bills would confer on osteopaths all the privileges of licensed physicians, with the exception that they can not practice major surgery The following bills have been recently introduced House bill No 256 for an act to regulate the practice of optometry—a bill similar in purport to that which was killed in 1905 House bill No 318 for an act to amend section 1 of State Board of Health act—bill would increase the membership of State Board of Health by two members, "one of whom shall represent the osteopathic school of medicine" House bill No 319, for an act to amend sections 2 and 3 of the medical practice act—would nullify the provisions of the present medical practice act, would take from the State Board of Health the right to determine the "good standing of medical colleges," would stipulate the course of instruction in medical colleges, which is to be lengthened if "osteopathic therapeutics" be added to the curriculum, would provide for an examination in medicine and osteopathic therapeutics—the latter only when such subjects are taught in the college, would provide for the licensing, without examination, of graduates of Illinois colleges of medicine or osteopathy, would license to practice as physicians and surgeons, graduates of osteopathic colleges in Illinois who shall pass an examination in the subjects enumerated in the act (Two subjects only specifically mentioned in bill, viz., osteopathic therapeutics and comparative medicine), and would permit these osteopaths to "enjoy all the rights and privileges which physicians and surgeons in the state now have" These bills have all been referred to the House Committee on Miscellaneous Subjects The time limit for the introduction of bills in the House of Representatives expired February 28

Chicago

College Changes Name—The American College of Medicine and Surgery Chicago has changed its name to the Chicago College of Medicine and Surgery

February Mortality—During February there were 2 973 deaths, equal to an annual death rate of 18 39 per 1 000 Pneumonia led the death causes with 611 deaths followed by consumption with 322, heart disease with 214, nephritis, with 182, violence (including suicide) with 175 scarlet fever, with 142, bronchitis with 119 and acute intestinal diseases, with 109

Health Inspection—During the week ended March 2 7 867 school children were examined Of this number 1 616 or little more than 20 per cent were found to be suffering from communicable diseases and were excluded from school attendance Nearly on third of the exclusions were on account of diphtheria or tonsillitis and nearly one tenth on account of scarlet fever

Personal—Dr and Mrs John B Murphy left for a trip to California March 3——Dr Arthur D Bevan chairman of the Council on Medical Education is taking a trip along the Pacific Coast visiting medical colleges—Dr and Mrs Charles P Small have engaged passage for Naples sailing June 8——Dr P J Hoshie Farrell has recovered from his recent serious illness and has resumed practice

Deaths of the Week.—During the week ended March 2, 786 deaths were reported 19 more than for the previous week and 223 more than for the corresponding week of 1906 The respective annual death rates being 19 45 17 49 and 14 32 per 1 000 Of the deaths 144 were due to pneumonia 91 to consumption 80 to violence (including suicide) and 50 each to Bright's disease and heart disease Scarlet fever caused 23 deaths diphtheria 5 whooping cough, 7, measles, 12 influenza 5 and typhoid fever, 9

KENTUCKY

Personal.—Dr W M Doores Crab Orchard is reported to be critically ill——Dr Edward L Carpenter, Louisville, who has been critically ill with intestinal hemorrhage, is reported convalescent

Milk Commission.—The milk commission of Jefferson County Medical Society, at the last meeting of the society, was empowered to take such steps as might be thought necessary to protect its rights in the certification of milk and to prevent the independent certification of milk not up to the proper requirements

Attending Physician Must Sign Certificate.—The health office has decided to stop the practice of death returns being returned to the department signed by other than attending physicians Undertakers have been accustomed to ask permission to sign certificates to avoid the trouble of taking them to be filled in and signed by the attending physicians, and as a result much confusion has resulted One certificate was returned recently signed "neammonia," the physician's name was misspelled and no initials were given Tubulocesis' was another return recently made

Dairy Industry—A most important meeting has just been held at Shelbyville by the farmers of Shelby and adjoining counties at which addresses were made by experts to the dairymen of the Shelby County Dairy Association An agreement was entered into whereby a committee of three representing the Dairy Association, the State Pure Food Commission and the State Board of Health will visit each dairy in the county and formulate such rules and regulations as to the production of milk as are thought best and make such recommendations as to barns herds, etc, as are found to be necessary, and these will be lived up to by the members of the association It is also agreed that an agreed bill will be presented to the next legislature looking to the suppression of tuberculosis in cattle in Kentucky, recompensing the farmer for stock killed that react to the tuberculin test

LOUISIANA.

Hospital News—The Touro Infirmary which has been remodeled at a cost of $300 000 was formally opened for inspection February 10, and two days later was ready to receive patients——The Eye, Ear, Nose and Throat Hospital New Orleans, has received a donation of $1,000 from the estate of Mrs Christine Maitre

Personal.—Dr Joseph Conn New Orleans has resigned as physician for the out door poor at Touro Infirmary and Dr Jules Lazard has been appointed in his stead——Dr Charles P Gleoke, Gretna, has been elected coroner of Jefferson Parish vice Dr Stephen D Gustine, Kenner, deceased——Dr C Milo Brady, New Orleans, has returned from a tour of medical inspection on the Honduras coast——Dr Luther Longino, Minden was thrown from a street car in Shreveport, February 12 fracturing two ribs and in addition sustaining severe contusions——Dr J W Reed New Orleans, sailed from San Francisco, March 8 for Seoul, Corea, to enter the mission field as a medical missionary

State Medical College—It is reported that ground will be broken within a very short time for the building for the Medical Department of the Louisiana State University at New Orleans, for which $100 000 is said to be available The board of supervisors decided on the location of the institution January 26, Shreveport being the only other competing city It is reported that the new institution will be located near Charity Hospital, and that the following will be members of the faculty Dr James M Batchelor, dean and professor of surgery, Dr William Kohlmann, professor of gynecology Dr Milton A Schlenker professor of obstetrics, Dr A Dana professor of anatomy Dr D A Stafford professor of therapeutics, Dr Waldemar T Richards associate professor of surgery, Dr A DeGrange professor of physiology Dr W Roussel professor of dermatology Dr Charles N Chavigny associate professor of gynecology and Dr Amedee B Crapp professor of x ray and electro therapeutics

Society Elections.—At the annual meeting of the Bienville Parish Medical Society held at Gibbsland Dr Shelton I Colvin Mount Lebanon, was elected president Dr Thaddeus H Pennington Arcadia, vice president and Dr Archibald I Nelson, secretary treasurer——The Ascension Parish Medical Society has elected the following officers President Dr William M McCaillard vice president Dr Tuite H Hanson and secretary treasurer Dr Paul T Thibodaux all of Donaldsonville——The Tangipahoa Parish Medical Society held its annual meeting at Amite City, and elected the following officer President Dr H G Morris Kentwood, vice president Dr Glenn I Smith Amite City and secretary treasurer Dr James L Lenoir Amite City——The St Tammany Parish Medical Society held its annual meeting in Mandeville and elected Dr Ruffin B Paine Mandeville president Dr Numar M Hollier Covington vice president and Dr Louis J Heintz Abita Springs secretary treasurer——The Rapides Parish Medical Society, at its annual election held in Alexandria February 2[illegible] elected Dr Richard O Simmons president Drs [illegible] Gremillion and Richard F Harrell vice presidents and Dr G M C Stafford secretary all of Alexandria

MICHIGAN

Birthday of Medical Department.—The [illegible]ersity of Michigan Medical Department An [illegible] City [illegible] anniversary, February 22.

in Barbour gymnasium, at which the address of the evening was delivered by Dr George Dock on "The Medical Library"

Irregular Practitioners Found Guilty.—A recorder's county jury in Detroit, on February 24, is reported to have returned a verdict of guilty in the case of Mrs Ida Biebler, charged with the illegal practice of medicine A week before Mrs Eliza Landau is said to have been found guilty of a similar offense Sentence was deferred

To Restrict Distribution of Medicine Samples.—The City Council of Saginaw recently enacted an ordinance requiring that no medical samples shall be distributed unless the distributor has been issued a license The health office will refuse permits on applications which do not contain an analysis of the medicine to be distributed

Communicable Diseases.—Centerville reports 20 cases of smallpox ——The threatened epidemic of scarlet fever in Holland has been checked by rigid quarantine ——Marshall is suffering from an epidemic of measles One public school has been closed temporarily ——Measles is reported to be epidemic at Munising and Allegan ——The public schools of Alma have been closed on account of an epidemic of scarlet fever

Personal.—A fire in the house of Dr Herbert A Eades, Bay City, January 28, damaged to the extent of $1 000 ——Dr Benjamin D King, Muskegon, has sustained a slight stroke of paralysis ——Dr Albert C Potter, Detroit, has been appointed surgeon of the Babcock (Mich) Lumber Company —— Dr James W Gauntlett Traverse City, who a short time ago fell through a sidewalk fracturing his left arm, suffered a severe burn of the thigh, February 22, from carbolic acid

NEW YORK.

Stony Wold Fund Completed.—It was announced on March 2 that the fund had been completed on which the conditional gifts of $12,500 each from John D Rockefeller and Anson R. Flower depended The institution is now entirely free from the $75,000 debt with which it was encumbered.

Convicted of Illegal Practice.—Dr Eben A Wood, Syracuse, who is said to have been convicted several years ago of performing a criminal operation is reported to have been convicted by a jury in the Onondaga County Court, February 14, of illegal practice of medicine, and remanded for sentence

Sohmer Bill Passed.—Senator Sohmer's bill prohibiting the removal of a patient from one hospital to another in New York City has been passed by the Senate The bill compels the superintendents of New York city hospitals to admit all patients brought to them, if there is room in the institution and if the patients are not suffering from contagious diseases

Protest Against Polluted Ice.—The Merchants' Association Committee on pollution has taken steps to prevent the harvesting of ice from the Hudson River near the mouths of the Rondout and Catskill creeks This locality is regarded as particularly dangerous because of an epidemic of typhoid fever which has been prevalent in Catskill all winter, 20 deaths from that disease having been reported from that village during the winter

Personal.—Dr Frederick J Barrett, Buffalo has been appointed examining surgeon for the eye, ear and throat for the Buffalo pension bureau ——Dr Walter G Frey, Long Island City, has been appointed deputy coroner of Queens County, vice Dr Benjamin Strong, who is at present in New Mexico on account of ill health ——Dr Wilfred Grenfell of Labrador lectured in Buffalo, February 26, 27 and 28, under the auspices of the Grenfell Association of America ——Dr Frank Van Fleet, 60 East Seventy seventh Street New York, has been elected a member of the National Legislative Council of the American Medical Association to represent the state of New York ——Dr Chester A Paull of the Loomis Sanatorium at Liberty N Y has been chosen superintendent and physician in chief of the new state tuberculosis sanatorium which will be opened in May at Wales Waukesha County, Wis

Legal Idea of Insanity.—Dr Allan McLane Hamilton in his lecture at the Academy of Medicine March 2 on the "Legal Idea of Insanity," summed up his ideas regarding new legislation by making the following recommendations

1 The Commissioner of Lunacy (to be appointed) should be a registrar and physicians should be compelled to report cases of insanity to him just as they do cases of contagious disease

2. Though the Commissioner in Lunacy may have power to license private institutions he should also be empowered to formulate additional requirements which would put some of them on a much higher standard than they occupy at present.

3 Commitments are chiefly to be looked on as re-enforcements by the judge of the persuasion exerted by friends physician and family of the patient and should be resorted to only when the latter can not be persuaded to go to the asylum

4 Everything should be done to make the appeals of committed patients available There should be severe punishment for the suppression of letters or interference in any way with the alleged lunatic's rights

5 There should be material reform in the attitude of the law regarding capacity and criminal responsibility Insane acts in themselves, in every relation they may have, receiving more weight than heretofore.

6 There should be a departure from conventions in old and arbitrary definitions.

7 Special insane acts should be studied with reference to the crime itself in a way they have not been up to this time.

8 The attitude of the courts should be much more charitable to the medical witness than it is to-day the intelligent medical man being put in possession of all the facts in the case and not being obliged to answer restricted questions which place him in a false position and which are deficient in the presentation of the facts

9 In all matters involving the determination of capacity or responsibility the medical man should be required to prepare a brief which should form the basis of his cross examination and this, if necessary must be supported by extraneous evidence which has received the sanction of the court as to heredity, previous history and facts communicated by others

New York City

Hospital to be Enlarged.—Plans have been filed for the enlargement of the Misericordia Hospital A five and six story extension is to be added with a frontage of 126 feet and a depth of 54 feet, at a cost of $125,000

Personal.—Dr Earl W Phillips of Bellevue Hospital is in the Willard Parker Hospital with diphtheria ——Dr Alfred Stevens was recently injured in a street railway collision —— Dr Henry Herman has been elected adjunct professor of pediatrics in the New York Polyclinic.

Harvey Lecture.—The tenth lecture in the Harvey Society course, at the New York Academy of Medicine, March 9, at 8 30 p m , by Dr Friedrich Müller, professor of medicine at the University of Munich, Germany, is on "Neuroses of the Heart" This is the last lecture of the present year's series

Winter Work of St. John's Guild.—The experiment of this society in extending its work on behalf of convalescent children to the winter season has been successful Only part of the hospital was equipped for winter work, but the accommodations thus provided have all been taken and there is a waiting list.

For Hospitals.—More than $2,000 was realized from the sale of boxes and seats for a benefit at the Academy of Music, for the enlargement of the Jewish Hospital for Deformities and Joint Diseases ——At a benefit recently given at the Metropolitan Opera House, $5,300 was raised for the Italian Benevolent Society, which is to be used for an Italian Hospital

Mortuary Statistics for 1906.—The total number of deaths during the year, of children two years and younger, was 6,689, and the total number of deaths of children under five years of age, 25,777 Deaths from typhoid fever of all ages was numbered 639, from scarlet fever, 491, from diphtheria and croup, 1,898, tuberculosis of the lungs, 8,955, tubercular meningitis, 765, other forms of tuberculosis, 474, smallpox, 6 measles, 1,145 The report shows that the death rate from all causes in the city was 18 35 per 1,000

Hospital Tipping System.—The Kings County grand jury for February has adopted resolutions calling on the March jury to investigate conditions in the Brooklyn Hospital, where it is alleged that there is an elaborate system of tipping among the orderlies which causes great suffering to patients unable to pay Dr Hanneman, the superintendent of the hospital, said that it is the custom in nearly every hospital for patients to give fees to the orderlies, but denied that there was any organized system of graft or that any patient had suffered from neglect.

Health Report.—There were reported to the sanitary bureau for the week ended February 23, 360 cases of tuberculosis, with 220 deaths, 277 cases of diphtheria, with 40 deaths, 208 cases of scarlet fever, with 13 deaths, 259 cases of measles, with 10 deaths, 66 cases of whooping cough, with 5 deaths, 45 cases of typhoid fever, with 12 deaths, 13 cases of cerebrospinal meningitis with 12 deaths, 76 cases of varicella and 1 of smallpox, making in all 1,395 cases, with 319 deaths —— During the week there were 1 671 deaths, as against 1 656 deaths for the corresponding week of last year Of these deaths 456 were of children under five years of age There were 1,395 cases of contagion reported, as against 1,349 for the same week of last year The increase is due chiefly to scarlet fever

Provision Made for Two Milk Stations.—The milk committee of the New York Association for Improving the Condition of the Poor has almost completed plans for the establishment of two large stations for the pasteurization of milk and the

sterilization of nursing bottles and nipples There will be a number of auxiliary branches from which milk will be distributed to those who wish it Twenty doctors will be employed for consultation and 100 nurses will have charge of the various distributing stations, and will be on call for special service at any time The committee does not intend to compete with the Strauss stations, but to supplement that work. It is believed that about 20,000 children will be reached in this way At stated intervals the doctors will deliver public lectures on hygiene in the home, and the nurses will go among the consumers to give advice and assistance to the mothers. The health department, pending the increase of the number of milk inspectors, has instituted a system of following up inspection, by a series of letters, to assure the dealer or dairyman that he has not been forgotten by the department

Still Agitating the Milk Question.—Eight states supply milk to New York City, and it is stated that the Health Department will endeavor to get the coöperation of the proper authorities in each as regards the safeguarding of the supply While the department is not ready to give its plans in detail, it is understood that it will come out strongly for better inspection and that $250,000 will be asked for this purpose A conference of officials representing the leading interests of this country regarding tuberculosis in cows is one of the possibilties of the near future The milk committee of the Society for the Improvement of the Condition of the Poor has decided to oppose the Pasteurization of the entire milk supply At a meeting of the New York Milk Committee special emphasis was laid on the importance of Pasteurizing the milk for infants, and it was urged that depots for this purpose be established before June A committee was appointed to seek the coöperation of the State Board of Health and of the Department of Agriculture in relation to the destruction of tuberculous cattle and to incite greater activity in local health boards in reference to reporting cases of communicable diseases in persons on farms or who handle milk

PENNSYLVANIA.

Dixon Again Confirmed.—The nomination of Dr Samuel G Dixon, Ardmore, to be state commissioner of health, was sent to the senate by Governor Stuart and confirmed, to take effect March 1 Dr Dixon was originally appointed to this office, the salary of which is $10,000 a year, by Governor Pennypacker soon after the creation of the Department of Health by the legislature of 1905

Hospital Vacancies.—Two vacancies will occur July 1 in Hamot Hospital Erie The hospital has 80 beds and more than 1,000 patients were admitted last year The term of service is one year, six months as medical and six months as surgical interne Appointments are made without examination Further information may be had from Dr Charles G Strickland, secretary of the medical board, Erie

Against Vivisection.—Representative Townsend of Philadelphia has introduced a bill in the legislature providing that it shall be unlawful for any person to vivisect or experiment on any living creature whatever, it matters not whether or not the experimentation shall be done in scientific research The penalty is to be a fine of from $100 to $500 and imprisonment for from one to six months, either or both

Philadelphia.

Betterment of Water Supply.—Major Gillette, chief of the bureau of filtration, has recently inspected the filtration plants at Belmont and at Torresdale At Belmont particular attention was paid to the location of the preliminary filters, for which a contract was recently awarded These preliminary filters will increase the yield from the Belmont beds from 30,000 000 to 60,000 000 gallons It is said that by April 1 the northeastern section of the city will receive filtered water

Bequests.—By the will of Benjamin F Butler an estate valued at $15 000, is divided between the Presbyterian Orphanage and the Presbyterian Hospital——According to the will of William Miller, $100 is left to St Timothy's Memorial Hospital——By the will of the late Emily D Wagner $5 000 is bequeathed to St Timothy s Hospital, Roxborough

Donation Day.—The Philadelphia Living in Charity and Nurse School held its donation day March 2 The hospital was open all day for inspection by visitors Donations of money food clothing and medical supplies were received During the past year the hospital has cared for more than 1,200 destitute women

Do Not Support Hospitals.—The senate appropriations committee has completed its investigation of the Philadelphia hospitals Members of the committee condemn the indifference of the city to their support, and special criticism was made of the failure of large industrial establishments to give financial support to the hospitals to which their injured employes are taken.

Alumni Information Wanted.—A committee of the alumni of all departments of the University of Pennsylvania is preparing a catalogue of all graduates and non graduate matriculates of the university Special information is wanted of graduates of the class of 1809 of the medical school The information should be sent to the editor of the alumni catalogue committee University of Pennsylvania

GENERAL

American Physio-Therapeutic Association.—This newly organized medical body, starting with a membership of over 100, will give its attention to all drugless (physical mechanical, psychic) therapeutic and diagnostic methods The officers are as follows President Dr H H Roberts, Lexington, Ky , secretary, Dr Otto Juettner, Cincinnati, treasurer, Dr George H. Brant, Richmond, Ind.

Carroll's Merited Promotion.—A special act of Congress, February 27 authorized the President to appoint Lieutenant and Assistant Surgeon James Carroll, U S Army, a surgeon with the rank of major The President at once approved this bill and sent in Major Carroll's nomination to the Senate and it was confirmed promptly, so that Dr Carroll is now a major in the Medical Department of the Army James Carroll was born in England June 5, 1854 At the age of 15 he migrated to Canada and later came to this country, where he first enlisted in the Army Jan 9, 1874 He was promoted corporal May 1, 1874, and sergeant Jan 1, 1875 He served continuously in the line of the Army until appointed hospital steward Sept 15, 1883 While still a soldier, he began the study of medicine at the University of New York City, during the session of 1886 1887 After the break of a year he resumed his medical studies in Baltimore at the University of Maryland, in 1889 1891 and received his degree from that institution During the winters of 1891 1892 and 1892 1893 he undertook graduate work in pathology and bacteriology at the Johns Hopkins Hospital His first association with Dr Walter Reed was in 1893, when he was assigned to duty at the Army Medical School in Washington, and they continued to be more or less connected during the next six years His service was continuous as hospital steward until he was appointed contract surgeon May 22 1898, and assigned to duty in the laboratory of the Surgeon General's Office Detailed as a member of the Army board for the study of Infectious diseases in the Island of Cuba, in association with Major Walter Reed and Acting Assistant Surgeons Aristides Agramonte and Jesse W Lazear, in the course of their experiments, he voluntarily submitted to the bite of an infected mosquito Aug 27, 1900, and was taken sick with yellow fever Aug 31, 1900, suffering a severe attack. His was the first case of experimental yellow fever He was confined strictly to bed until September 13, and convalescence being slow, he left Cuba Oct 9 1900, on sick leave returning for duty Nov 11 1900 He took part in all the experimental work of the board, made nearly all the experimental inoculations, and had charge of the infected mosquitoes until March 4 1901, one month after the departure of Major Reed At this time he had been recommended for appointment to a volunteer majority by General Leonard Wood and Surgeon General Sternberg, but Secretary Root decided that no more appointments would be made After returning from Cuba his time was devoted to the study of mosquitoes that had been infected and preserved for the purpose In August he again proceeded to Cuba, under orders, alone, for the purpose of performing additional experimental work in which he produced six more experimental cases of yellow fever, all of which ended in recovery In 1903 he showed by experimental demonstration that the supposed protozoön parasites reported to have been found in yellow fever infected mosquitoes were ordinary yeast cells He was assigned by General Sternberg in 1897 to the work of studying the supposed cause of yellow fever in association with Major Reed and in this work it was shown that the supposed cause of yellow fever described by Professor Sanarelli was closely related to the hog cholera bacillu In 1898 he was sent to Camp Alger to study the blood of the fever patients and he was the first to show and report to General Sternberg that the prevailing illness among the troops was typhoid fever and not mal[illegible] fever [illegible] as then ordered to Camp Cuba Libre [illegible] work, and his results were [illegible] phoid fever board. He [illegible]

George H Thomas, Chickamauga Park, to obtain samples of the waters in use and to examine them bacteriologically His service as contract surgeon continued until Oct 27, 1902, when he was appointed first lieutenant and assistant surgeon in the Medical Department, the age limit having been waived to permit him to appear for examination. He was then assigned to duty as assistant curator of the Army Medical Museum, and as professor of bacteriology and clinical microscopy at the Army Medical School, having previously served as assistant during every session of the school He was appointed curator of the Army Medical Museum by an order of the Surgeon General, dated July 3, 1903 He has performed the above duties continuously since his appointment and completed thirty three years' continuous service in the Army on Jan 21, 1907 He assisted Major Reed in the department of bacteriology and pathology of the Columbian (now George Washington) University from the session of 1895 96 until the death of Major Reed, whom he has now succeeded as professor of those subjects, which he teaches to evening classes

CANADA.

To Make Tuberculosis a Reportable Disease—A large delegation, representing the fraternal organizations doing business in Canada, waited on the Ontario government recently, asking that consumption be made a notifiable disease in the province

Toronto's Water Supply—Dr J A Amyot, provincial bacteriologist of Ontario recommends for Toronto a filtering basin on Scarboro Heights, six miles east of the city, at a cost of $1,000,000 He opposes a trunk sewer, which would probably cost $6,000,000 and would not then insure pure water for the city

Student Deaths—Mr J A Macdonald, Peterboro, Ont, a first year student in medicine at Toronto University, died in Toronto, February 28, of typhoid fever——Mr Smith Henderson, son of Dr Henderson of Ottawa, and a senior student in medicine at McGill University, died in Montreal of appendicitis, aged 22

Registration Case in Alberta.—The case of Lafferty, the registrar of the College of Physicians and Surgeons of Alberta, versus Lincoln, a physician who was convicted of practicing in Alberta without a license, will be appealed from the Supreme Court to the full court, as the question of the constitutionality of the Alberta medical act has been raised

"Patent-Medicine" Legislation.—A bill respecting proprietary medicines has been introduced in the Dominion House of Commons by Minister Templeman from British Columbia It provides for the sending of samples from time to time to the special department for analysis, for an affidavit of contents and for the elimination of poisonous drugs from mixtures Under its provisions a license will be issued to all manufacturers who comply with the provisions of the act

Annual Report of the Inspector of Hospitals of Ontario—This report states that in Ontario there are 61 hospitals, 37 refuges and 30 orphanages, 3 homes for incurables, 2 convalescent homes, 2 Magdalene asylums and 25 county houses of refuge receiving governmental aid The total number of patients under treatment in these hospitals during 1906 was 41,050, and the total expenditure in connection therewith was $1,228 289 The Ontario governmental grant toward these was $110,000

Annual Report of the Toronto General Hospital.—This report for the year ended Sept 30, 1906 shows that on Oct 1, 1905, there were 315 patients in the institution, and on Sept 30, 1906, there were 279 The total number admitted during the year was 3,583 and the number of births was 197 The average length of stay of each patient was 27 19 days The cost *per capita per diem* for maintenance was $1 33 In the main theater in the hospital 905 operations were performed in the pavilion 230, in the eye and ear and nose and throat departments, 162

Personal.—Dr T G Roddick dean of the Medical Faculty of McGill University, Montreal, will relinquish that office next year after being connected with McGill for forty years—— Dr Howard T Barnes has been appointed professor of physics in McGill University——Drs Bell and Watts of the Ontario Board of Health are inspecting the lumber and mining camps in northern Ontario——Dr Wilfred T Grenfell delivered a lecture in Toronto, March 8 on 'The Fisherfolk of Labrador"—— Dr B J McConnell, Morden Man will run for the Manitoba legislature in the coming elections, in the interest of the liberal party——President Eliot of Harvard University has been the guest of the American university men in Montreal at their annual banquet The subject of his address was "The University—Its Aims, Aspirations and Work."

To Form Toronto Academy of Medicine.—It is almost settled that the Ontario Medical Library Association, the Toronto Clinical Society, the Toronto Medical Society and the Toronto Pathological Society will merge into the Academy of Medicine, Toronto The academy will be managed by a council of 12, and the first council will be composed of the officials of the Ontario Library Association and the presidents and secretaries of the other three societies These will choose their own officers, while succeeding councils will be composed of nineteen members The academy has a handsome residence of 15 rooms in Queen's Park, and a library and auditorium to cost $50,000 will be added Dr J F W Ross is president of the Ontario Medical Library Association, Dr H B Anderson, of the Toronto Clinical Society, Dr R D Rudolf, of the Toronto Medical Society, and Dr J A. Amyot, of the Toronto Pathological Society

Hospital News—The Grace Dart Home for Destitute Incurables has just been opened in Montreal——At the recent annual meeting of the Board of Governors of Notre Dame Hospital, Montreal, it was announced that $500,000 is still required for the new hospital Dr L. de L. Harwood read the annual medical report, which stated that during the past year 3,255 patients were treated, 1,864 being men and 1,391 women The percentage of deaths was 7,89——In St Paul's Hospital, for contagious diseases, Montreal, 200 cases of diphtheria, 67 scarlatina, 196 measles and 17 doubtful cases were treated last year The death rate was 4 5——The Western Hospital, Grace Hospital and St Michael's Hospital, Toronto, are seeking a joint grant of $200,000 from Toronto City Council——During the year 1906, 3,444 patients were treated in the Royal Victoria Hospital, Montreal, an increase of 351 over 1905 There were 1,970 Protestants, 1,148 Roman Catholics, 279 Hebrews and 47 other faiths The free patients numbered 1,989, the public ward patients 1,021, and private ward patients 434 In the out patient departments the total number of patients treated was 4,229 The income for the year was $160,436 09, while the ordinary expenditure was $130,353 30, the balance being applied to indebtedness incurred by new buildings Resolutions of appreciation and regret were adopted at the annual meeting just held, on the death of Dr James Stewart, the senior physician The appointments of Drs W F Hamilton and Charles F Martin as physicians were confirmed by the management Dr Francis J Shepherd was appointed consulting surgeon to the hospital

FOREIGN

Women Medical Students at the German Universities.—Seven German universities admit women on the same terms as men, and at present they have a total register of 116 women in the medical departments This is an increase of 56 over the preceding year

Sixth International Tuberculosis Conference—The route of infection in tuberculosis is to be the principal theme discussed at the next international conference on the subject of tuberculosis, which is to convene at Vienna, September 19 21 Active preparations have been under way for some time to render the discussions exceptionally profitable

Compulsory Day of Rest in France—Recent legislation in France has made rest on one day of the week compulsory for employés It is left to the proprietor of the establishment to plan the day of rest so that each of his employés can have one day free out of every seven The chief of the public hospital and organized charities service, the *Assistance publique,* has asked for increased appropriations, as he will have to add several hundred more persons to his staff of attendants, nurses, etc, in order to provide for the day of rest in the week

German Congress for Internal Medicine.—The twenty fourth congress for internal medicine will be held at Wiesbaden, April 15 18, 1907, with von Leyden in the chair The only subject appointed for discussion is "Neuralgias and Their Treatment," but communications have already been announced from Jaksch of Prague, on "Chronic Manganese Toxicoses," Treupel on "Percussion of the Heart," Hirsch and Spalteholz on the "Coronary Circulation" and Müller and Jochmann on a new method to determine the proteolytic action of ferments This method is proving a valuable means to differentiate tuberculous processes by the ferments in the pus

Increase in Fees in Europe—The increased cost of living is causing physicians at many points to raise fees The medical societies have established minimal rates in Vienna, Greater Berlin, Leipsic, and elsewhere In Leipsic the medical society decided to enforce the increased rates for all accounts left over

from 1906 The medical assistants in the hospitals in Dresden and Berlin also presented a petition to the authorities asking for increased remuneration This was granted them in Dresden, but denied them in Berlin We learn from our exchanges that all the petitioners and all the volunteer physicians in the Berlin hospitals at once joined the *Leipziger Verband*

The Next International Congress of Gynecology—As will be remembered, the Fifth International Gynecologic Congress was to have been held at St Petersburg last year, but was postponed. The Russian gynecologists who had the matter in charge have now surrendered their powers to the permanent general secretary of the International Gynecologic Association, which was founded in 1893, with its central office in Brussels The organization of the next congress is therefore, left entirely in the hands of Dr Jacobs the general secretary and he is now taking steps to organize it in due form He has at his disposal the funds accruing from membership dues, etc., which are always given to the committee organizing the congress at the time

Medical Information Bureau at Berlin.—The Kaiserin Friedrich Haus at Berlin, which is the center for official postgraduate instruction throughout the German empire, has had installed an information bureau for the convenience of local and visiting physicians Particulars can there be learned in regard to courses, hospitals, medical collections, special operations lectures and the like The visiting physician can there learn whatever he needs to obtain the greatest benefit from his stay in Berlin The official title of the information bureau is the Auskunftei, Kaiserin Friedrich Haus Luisenplatz 2 4 Berlin NW, 6, Germany No charge is made for the services THE JOURNAL has several times referred to the similar scientific information bureau at Paris in charge of Dr R. Blondel, à la Sorbonne, Paris, the first of the kind organized, which has been in successful operation for several years

Annual Meeting of the German "Leipziger Verband."—This organization to promote the economic interests of the profession has continued a progressively successful course since its foundation only a few years ago The number of cases in which it has had to interfere to protect physicians in conflict with the sickness insurance societies has constantly declined being only 92 during 1906 Its efforts were crowned with success in the overwhelming majority of cases, although it still publishes in our exchanges a long list of towns where physicians are warned not to accept the contract positions offered without conferring with the *Leipziger Verband* A number of the towns on the list have been there from the very first organization of the association, old embittered feelings probably interfering with the settlement of the trouble As a rule, now, when a conflict threatens all trouble is averted by the prompt intermediation of the *Verband* It has also secured equitable and uniform rates and conditions for ship doctors Another phase of its activity has been its free employment and exchange bureau by which physicians have been more evenly distributed over the country The *Verband* has also inaugurated series of postgraduate lectures on exclusively economic and ethical questions, which have been highly appreciated

LONDON LETTER

(From Our Regular Correspondent)

LONDON, Feb 23, 1907

Reduction of Infant Mortality Without Municipal Milk Depots

At a meeting of the Incorporated Society of Medical Officers of Health of Great Britain held on February 8 it was generally agreed that municipal milk depots are subsidiary means of reducing infantile mortality In the industrial towns of the north of England one of the principal causes of infantile mortality is the working of married women, and it was stated that so long as a woman can earn more money than her husband this is likely to continue Bad business drunkenness among the lower classes, ignorance of the first principles of health and adherence to tradition are other potent factors To ensure that every child not breast fed should have a supply of clean unadulterated milk would, said one speaker, go a long way toward lowering the death rate among infants from diarrhea

Antivaccination Legislation.

It is expected that the accession of a liberal government will be followed by enactment of legislation favorable to the spread of smallpox Compulsory vaccination was abolished in 1898, but people who objected to having their children vaccinated were compelled to go before a magistrate and satisfy him that they had conscientious objection to it The antivaccinationists nearly all belong to the liberal party and at the last elections succeeded in getting pledges from a number of members of parliament to support some alteration of the law in their favor In the address in answer to the King's speech, Sir William Collins—an ophthalmologist and one of the few prominent members of the medical profession opposed to scientific prophylaxis—urged the substitution of isolation and disinfection. In replying the government undertook to substitute for the present system a new one by which it would be unnecessary for a "conscientious objector' (sic) to go before a magistrate and allowing such individuals to secure exemption by making a statutory declaration This satisfied the antivaccinationists

The Pollution of the Thames

Dr Herbert Williams, health officer of the port of London has made a comprehensive examination of the water of the Thames Though an enormous amount of sewage is discharged into the river amounting to 200 000 000 gallons daily at Barking and Crossness (only one of several sources of pollution) the general condition of the water in the Thames estuary he finds is not in a state of serious pollution The shellfish layings within the jurisdiction of the port sanitary authority are few and comparatively unimportant Samples of water taken one mile below the sewer outfalls of Southend and Sheerness respectively show no evidence of gross pollution This is mainly due to the large dilution with sea water However several outbreaks of typhoid fever due to shellfish taken from the estuary of the Thames have been reported in THE JOURNAL from time to time

Amalgamation of London Medical Societies

The amalgamation of the medical societies of London has at last been effected, under the name of the "Royal Society of Medicine" The names "Royal Academy of Medicine' and "Imperial Academy of Medicine" were rejected

Infant Mortality in London During 1906

Infant mortality measured by the proportion of deaths among children under one year of age to registered births in London last year was equal to 130 per 1,000, against 130 144 and 129 in the three preceding years

Mortality in London During 1906

During 1906 71 155 deaths of persons belonging to London were registered equal to a rate of 15 1 per 1 000 against 15 2, 16 1 and 15 1 per 1 000 in the three preceding years the average rate for the ten years—1896 1905—being 17 3 per 1 000 In 1906 there were 4 424 fatal cases of diarrhea more than 1 000 in excess of the average number The aggregate mortality from the principal infectious diseases was very slightly below the average for the four preceding years

Epidemic of Cerebrospinal Meningitis in Great Britain

Cerebrospinal meningitis shows no signs of abating in certain parts of Great Britain Twelve cases and 6 deaths have been reported in England in Scotland 313 cases 185 deaths in Ireland, 122 cases, 66 deaths The British Local Government Board has issued a circular warning all local sanitary authorities to be on the alert to detect the presence of the disease or to satisfy themselves as to its absence

DUBLIN LETTER

(From an Occasional Correspondent)

DUBLIN Feb 20, 1907

The University Question

The past few months have been some of the most exciting within our memory for Irish medical men Changes political, social and educational are in the air, and in many of them our profession is closely concerned Two commissions—one royal and one vice regal—have recently reported on matters of much interest Of these, by far the more important is the question of university education in Ireland For many years the Roman Catholics of Ireland have been discontented with the provision made for them in the matter of university education They claimed that of the two universities in the country one—that of Dublin identical in constitution with Trinity College—is prevailingly Protestant in character while the other the Royal University being a mere examining body is insufficient to supply a thorough higher education With a view of settling the question and also of inquiring into the domestic affairs of Trinity College the government in June appointed a royal commission consisting of nine members These gentlemen examined an enormous number of witnesses and documents and reported a month ago with commendable promptitude They are unanimous [illegible]

reforms in Trinity College, which would render it more efficient, while at the same time they are unanimous in recording a high opinion of the position and reputation of Trinity College. On the point, however, of providing university education for Roman Catholics, there was little agreement. Four commissioners suggested the establishment of a new college suitable for Roman Catholics affiliated with Trinity College in a reconstituted University of Dublin. One, while agreeing with this plan in theory, regarded it as impracticable at present. Three suggested a new college with no relation to Trinity College, but as an integral part of a reconstituted Royal University. The remaining commissioner regarded the demand for a new college as unreasonable.

Before the public had time to digest this strange report, and before the evidence on which it was based had reached them, on the very eve of his departure for the United States, Mr. Bryce, as his last official act in Ireland, announced the intentions of the government. The Royal University was to be abolished, Dublin University was to be reconstituted and to have as its constituent colleges Trinity College, the Queen's Colleges in Belfast and Cork, and a new college in Dublin. The Queen's College in Galway was to be an affiliated college, but not represented on the governing body.

Cerebrospinal Meningitis

A few cases of cerebrospinal meningitis have occurred in Dublin, more than half of them being fatal. If lack of sanitary administration has anything to do with the spread of the disease, then Dublin may expect a severe outbreak. For the past few months, even in the marked absence of any epizoötic disease, the death rate of Dublin has been among the three or four highest in Europe. In Belfast there have been within a few weeks over eighty cases, of which more than half have ended fatally. This disease is therefore of exceedingly virulent type.

VIENNA LETTER.

(From Our Regular Correspondent.)

VIENNA, Feb. 15, 1907.

The New Clinics

The new clinics, which are destined to offer modern equipment for the scientific treatment of diseases, are almost completed. At first only the two gynecologic clinics will be opened. They are built on the pavilion system. Each clinic is erected in the shape of a T, and comprises the ward, operating theater (one large one, one small one for each clinic), the outpatient department, the lecture hall, a chemical and experimental laboratory and a number of rooms for students. The medical curriculum in force since 1905 requires every student of gynecology to be attached to the clinic for at least two terms of 14 days each, and to assist in the work under the supervision of the assistants. The clinics are three story buildings, with elevators, low pressure steam heating, and all equipment for the comfort of the patients. Two medical clinics are contemplated instead of the three existing at present. The third clinic was erected for Professor von Schrötter [illegible]. As he now retires on account of reaching the limit (70 years) his clinic will be discontinued. Von [illegible], an authority on the diseases of metabolism, lays stress on chemistry at the bedside, and a special feature of the clinic will be the dietetic kitchen. This kitchen will prepare the necessary diet for patients who require specially prepared food (diabetics, epileptics, arteriosclerotics). In the future such patients will be treated as can be utilized for demonstration. The others (the so called uninteresting cases) will be treated in another hospital, which is also in course of construction and which will contain 1,600 beds, as many as the present general hospital. The expense of the new building [illegible] will be obtained partly by the sale of the present general hospital stands, which is valued at $2,000,000.

Campaign in Austria.

[illegible] the time of the Romans [illegible] for the anopheles, and [illegible] has been taken during [illegible] of mosquitoes [illegible] and drain [illegible] seacoast in [illegible] destroy the [illegible] fishing [illegible] this [illegible].

Book Notices

A HISTORY OF CHEMISTRY. From Earliest Times to the Present Day. Being also an Introduction to the Study of the Science. By E. von Meyer, Ph.D., Professor of Chemistry in the Technical High School, Dresden. Translated with the Author's Sanction by G. McGowan, Ph.D. Third English Edition, etc. Cloth. Pp. 691. Price, $4.25 net. New York: The MacMillan Company. 1906.

The best index of the general standing of this work is the fact that we have before us the third English edition. The first was issued in 1891, the second in 1898, and now comes the third. In each case the English edition has followed closely the original German, and all the English translations have been made by George McGowan. The reception by the chemical world of this history of chemistry has consequently been so friendly as to indicate at once that Professor von Meyer's work bids fair to be a classic in its field. Any special words of commendation on the part of the reviewer are consequently wholly superfluous. With a view of indicating more especially to physicians the general scope of the book, a brief, general statement of its contents and the manner in which they are presented may be attempted.

The avowed purpose of the work is to describe within reasonable compass the development of chemical knowledge and especially the general doctrines of chemistry from their earliest beginnings to the present time. The growth of particular branches of the science and of industrial chemistry is also detailed more or less minutely. The essential biographical facts concerning the pioneers and leaders in chemical investigation and teaching are given in connection with brief, but interesting characterizations of their personalities, while the part taken by each in the promotion of chemical knowledge and theory is made the subject of discriminating discussion in the proper place. For the purpose of clear, connected presentation the history of chemistry is divided into several distinct periods and the events within each period considered in natural (principally chronologic) sequence. The earliest period and the longest is the Alchemistic which extends practically from the inception of chemical knowledge to the first half of the sixteenth century. This period was dominated by the fixed belief or dogma that one so called element could be transformed into another and throughout this period the historian finds but little else to record than the continual striving to transmute the base metals into the noble, to create gold and silver. Thus Suida in the eleventh century defines chemistry as the artificial production of gold and silver. Practically contemporaneously with the Reformation, chemistry began a new development mainly through the efforts of Paracelsus and his followers who reduced health and disease to chemical processes pure and simple and maintained that chemical means only were able to restore health. Paracelsus boldly announced that the object of chemistry is not to make gold but to prepare medicines. This is the period of Iatro—or medical chemistry, it is marked by the mutual interaction of medicine and chemistry and the author emphasizes the fact that while mutual enrichment resulted and new paths were opened to both medicine and chemistry the latter in reality profited the more because it became transferred into the hands of men with scientific culture. The great part that Paracelsus took in this new development is more clear and the fact is again emphasized that the recent studies of Paracelsus tend to enhance the appreciation of the real service that he rendered.

The history of chemistry as an independent branch of natural science, following the paths of exact research without immediate regard to practical ends, begins in the middle of the seventeenth century. Robert Boyle was the pioneer. He proclaimed the object of chemistry to be the acquisition of knowledge of the composition of substances. The latter part of the seventeenth and the whole of the eighteenth century were signalized by continuous investigation of the problems of combustion, and inasmuch as these investigations were guided by the conception that the hypothetical fire stuff, phlogiston, was the universal principle of combustibility, this period is set apart as the Phlogistic Period. With the fall of the phlogistic theory, largely through the work of Lavoisier, begins the present chemical era, the guiding star of

which has been and still is the atomic theory, hence the present is the Period of the Chemical Atomic Theory The dependence of chemistry on pharmacy and medicine—at one time pharmacy was the only road to the study of pure chemistry—ceased, and chemistry became an indispensable aid to practically the whole range of natural science The history of the birth and development of the atomic theory and of organic chemistry is traced in an interesting manner and with considerable minuteness In the latter half of the work is given the special history of the various branches of modern chemistry, outgrowths of an ever increasing *special* ization.

To physicians this work recommends itself strongly for various reasons First of all is the great value of genuine historical study for the understanding of general chemistry, the increasing and fundamental importance of which to medi cine is evident to all And then the historical relations be tween medicine and chemistry seem to make the history of chemistry attractive on medico historical grounds as well. Many of the brightest pages in the history of chemistry are written by physicians Paracelsus, Van Helmont, Stahl, Black, Berzelius—"the brilliant model for ages to come"—and others Finally von Meyer's work recommends itself be cause of its style and form, taking it all in all, it is a book of rare educational value

PHYSICAL CHEMISTRY in the Service of Medicine Seven ad dresses By W Pauli. *Authorized translation* by M. H Fischer First edition Cloth Pp 156 Price $1.25 net. New York John Wiley & Sons 1907

It is a pleasure to observe that publishers find encourage ment to put books of this character on the market with ever increasing frequency, for it indicates a healthy growth in the number of physicians who are endeavoring to keep abreast of the progress of the sciences fundamental to medicine Fischer has translated a collection of seven lectures by Pauli, each of which represents a general summary of the relation of recent studies in physical chemistry to various aspects of biology and medicine. They make no pretense to a systematic consideration of physical chemistry, or even of the relation of physical chemistry to the problems selected for discussion, but rather select certain features which are of interest be cause of the definite progress recently made or because of special application to medical problems Consequently the reader needs at least an elementary knowledge of the prin ciples of physical chemistry in order to follow the author intelligently, although most of the elementary principles are brought out at one place or another in the book One is im pressed with the idea that Pauli's lectures have their greatest value as supplementary reading to such a work as Cohen's "Physical Chemistry for Physicians," which the same trans lator rendered into English a few years ago This smaller, more recent book generalizes the principles elucidated by Cohen, and brings the subject of the relation of physical chemistry to medicine well up to date The physician will find particularly interesting and suggestive material in the lectures on the therapeutic studies on ions, and on the rela tion between physico chemical properties and medicinal effects The translator has succeeded unusually well in transforming the shades of meaning, so delicately carried in the German original, into idiomatic English, the work being free from the abnormal construction so commonly seen in translations from the German

SAUNDERS' POCKET MEDICAL FORMULARY with an Appendix, Con taining Posological Table Formulas and Doses for Hypodermic Medication Poisons and their Antidotes etc. By W M. Powell M D Eighth edition thoroughly revised enlarged and adapted to the eighth revision (1905) of the U S Pharmacopeia Flexible Morocco Pp 209 Price $1 75 net Philadelphia W B Saun ders Company 1906

This new edition of a standard work introduces in its pre scriptions the more important of the recently discovered drugs The revision in accordance with the new Pharmacopeia, the blank interleaves for additional formulæ, the variety of emer gency information the convenient pocket book form, and the numerous prescriptions signed with the names of prominent practitioners will gain new friends for this valued *vade mecum*

PARAFFIN IN SURGERY A Critical and Clinical Study By W H Luckett, B S., M.D., Attending Surgeon Harlem Hospital and Frank I Horn M.D Assistant Surgeon Mt Sinai Hospital Dis pensary New York City With thirty-eight illustrations Cloth Pp 118 Price, $2 00 New York Surgery Publishing Company 1907

The indications and contraindications for the use of paraffin in surgery are discussed in detail The literature on the sub ject has been drawn on and supplemented by the clinical and experimental experiences of the authors The application of paraffin injections in the treatment of hernia and their value for cosmetic purposes in saddle nose deformity are shown by means of illustrated case reports

Correspondence

A Migratory Shingle Nail.

OGDEN, UTAH, Feb 25 1907

To the Editor —I have followed with interest the recent symposium in THE JOURNAL relating to the migrating needle, and now that about every one who cares to has told his story, I venture to obtrude with one that is authentic A few years ago I was attending a convalescing patient for whom I ordered chicken broth During the preparation of the chicken it was discovered that the liver, normal in every other way, was trans fixed by a common nail some two or three inches long usually called a shingle nail It was not a modern wire nail, but one of the old fashioned cut affairs The nail was situated about the anatomical center of the liver and protruded equally on each side of that organ The indications seemed to be that the nail had been in place a long time The nail was of a bright iron color, as if it had just been made, perfectly fitted the clean cut mortise and was surrounded, even with the surface of the liver, by a rectangular collar, which was hyaloid in character bluishly translucent and very hard It was indeed a curiosity, and after it was shown for some time to the local fraternity and others I sent it to the Smithsonian Institution where it still remains A S CONDON, M D

"Alcohol in Official Preparations"

ST LOUIS, Feb 24 1907

To the Editor —A letter in THE JOURNAL February 9 page 535, by Dr George Homan on the above subject, interests me The statements regarding the dangers from the use of alcohol in medicinal preparations when not necessary, are very much to the point Adding his views to the many others recently expressed, it seems that the time has really come to curtail the employment of alcohol as far as practicable

Speaking pharmaceutically, I would call the prescriber's attention to the fact that the U S Pharmacopeia and the National Formulary as now constituted offer the choice of so many non alcoholic liquid medicines that it is scarcely ever necessary to have to resort to those containing even small quan tities of alcohol Those containing objectionable amounts could be ignored and would never be missed

The entire therapeutics of the Pharmacopeia and the Na tional Formulary must be dictated by the medical profession and I trust that many more medical writers and practitioners will take sufficient interest in the matter, so that future phar macopeias and formularies when issued will be recognized as their standards in practice

A vehicle similar to aromatic elixir but containing no alco hol can be had by physicians for the asking Anise cinnamon and fennel waters are now official if needed coriander lemon and orange waters can be added Any and all of the mix clear with simple, orange or any other syrup or with glycerin Pharmaceutically it is an easy matter to make similar amend ments all down the line All we pharmacists want to know is What does the physician require?

I would advocate standard elixirs syrups and the other el gant pharmaceuticals of the National Formulary and U S

Pharmacopeia in all cases where such preparations are desirable. I would also advocate freshly prepared and extemporaneously prescribed emulsions of all kinds—these requiring no salicylic acid to preserve them

FRANCIS HEMM

Government Examination of Thermometers

ASHEVILLE, N C Feb 25, 1907

To the Editor —Some time ago I wrote of the unreliability of clinical thermometers sold in this country under the maker's certificate I have recently investigated this matter further, and as in the diagnosis of certain diseases the accuracy of thermometers even to a few tenths of a degree is of importance, it seems to me that the matter should be brought before the profession I have always used the thermometer of a well known English maker, who for years supplied Kew certificates with his thermometers, but latterly took up the American custom of certifying his thermometers by his own standard thermometers Becoming suspicious of the surprising perfection of the certificates given, I found on having them subjected to the government test at Washington, where all thermometers having more than 3/10 of a degree of error are rejected, that a large number were in this way turned down So much for the past To show now the excellent effect of a complaint from the medical public when an instrument of precision is poorly made and incorrectly certified, I had my druggist send on twelve dozen of the same maker's thermometers Of these twelve dozen only three thermometers exceeded the limits of allowable error for certification by the Government Bureau of Standards, and of those certified a large majority gave a certificate much nearer perfection than those certified a year or more ago If the profession throughout the country who are deeply interested in accurate thermometers would be careful to insist through their druggists, on having their thermometers certified by the government at Washington, the grade of thermometers now kept in stores would soon be very greatly improved We would thus increase the accuracy of our work CHARLES L MINOR, M D

Marriages

HERMAN C FRICK M D, to Miss Minnie Lauenstein, both of Evansville, Ind, February 20

A MERRELL MILLER, M.D, to Miss Jeannett Penwell, both of Danville, Ill, recently

OLNEY GALEN PLACE, M.D, to Mrs Ida Moensch, both of Boulder, Colo, February 16

EDWARD E HOPKINS, M.D, Rochester, N Y, to Miss Hazel Davis of Buffalo, at Honeoye Falls, N Y, February 11

DORA L DORN, M.D, San Francisco, and D S Walton of San José, Cal, at Oakland, January 26

WILLIAM EDGAR DARNALL, M.D, Atlantic City, N J, to Miss Emma Elizabeth Nesbitt, of Richmond, Vt, February 27

WALTER C ALVAREZ, M.D, San Francisco, to Miss Harriet Smyth, of Berkeley, Cal, February 22

Deaths

Acland Oronhyatekha, M D Toronto University Medical Faculty, a full blooded Mohawk Indian chief, probably the most notable man of his race, died in Savannah, Ga, March 3 Oronhyatekha was born in poverty on the Six Nation Reservation, near Brantford, Ont His early education was at a missionary school for Indian youths He then went to Wesleyan Academy, Wilbraham, Mass, and thence to Kenyon College, where he remained for two years He then matriculated at Toronto University While he was studying at the university the Prince of Wales made his visit to Canada, and Oronhyatekha was deputized by the chiefs of the Six Nations to deliver the "Address to the Queen" The young chief made such an impression on the prince that he was invited to continue his studies at Oxford, and there was placed under the tutelage of Sir Henry Acland, regius professor of medicine, whose surname Oronhyatekha adopted as his Christian name He completed his medical education at Toronto University and practiced for a while in that city He soon developed high qualities of executive ability and business acumen, shown especially in the line of fraternal society work He was a member of the Independent Order of Good Templars, and soon attained the highest office in its gift, which he retained for several years He also took charge of the Independent Order of Foresters at a time when it was at a low ebb, and by his talent soon built up the organization so that it is now on a most prosperous basis He was elected president of the National Fraternal Congress which assembled in Chicago in 1902 He also received the highest degree in masonry The Anthropological Building at the World's Fair contained a life size portrait of Oronhyatekha, who was described as the "greatest living Indian" Wise investments had made Dr Oronhyatekha very wealthy and he lived in a country place at Desoronto, near Toronto, formerly the capital of the Six Nations He had suffered from heart disease for several years, and had gone to Savannah for his health, and died in the Hotel De Soto, March 3, aged 65

Malek A. Southworth, M.D Censors of New York, 1846, College of Physicians and Surgeons in the City of New York, 1880, *a member of the American Medical Association*, formerly consulting surgeon to St Luke's Hospital, Utica N Y, and resident physician at the Mississippi Quarantine Station, New Orleans, resident fellow of the New York Academy of Medicine and original fellow of the New York Medical Association, formerly president of the Santa Clara County (Cal) Medical Society, for many years county health officer and president of the board of pensioners of Santa Clara County, who served with great distinction and honor in the Federal service during the Civil War, for twenty years a resident of San José Cal died at Wright's Station, Cal, February 16, from senile debility, aged 80

Lyman W Bliss, M D Geneva (N Y) Medical College 1876, a member of the state and county medical societies, and one of the oldest and most respected physicians of Saginaw, Mich, surgeon of the Tenth New York Vounteer Cavalry during the Civil War, president of the Michigan State Medical Society in 1891, and for three years mayor of Saginaw, who had gone to Texas for his health died suddenly in San Antonio, February 19, from heart disease, aged 70 The Saginaw *County Medical Society held a special meeting, February* 22 at which tribute was paid to the memory of Dr Bliss, and fitting resolutions were drafted

John S Love, M.D Jefferson Medical College, 1856, a member of the American Medical Association for many years, founder of the Linn County (Iowa) Medical Society, and one of the earliest members of the Iowa State Medical Society, for fifty years an esteemed and respected practitioner of Springville Iowa died at his home in that place, February 22, after an illness of three weeks, aged 75

George W Archer, M.D Jefferson Medical College Philadelphia, grandson of Dr John Archer, the first medical graduate in America, surgeon of Stonewall Jackson's brigade in the Confederate service during the Civil War, died at his home near Emmorton, Hartford County, Md, February 16, from senile debility, after a long illness, aged 83

Robert Provan, M.D Medical School of Harvard University, Boston, 1860, a member of the state and county medical societies, for many years prominently connected with the British and Canadian charitable societies of the city, a member of the Common Council of Boston in 1885 and 1886, died at his home in Brookline, February 23

J W Beall, M D Memphis Hospital Medical College, Medical Department Baptist Southwestern University, Memphis Tenn 1899, a member of the American Medical Association and division surgeon for the Cotton Belt Railroad, an ardent temperance advocate, was shot and killed by a saloonkeeper in Malden, Mo, February 18, aged 32

Francis Louis Roge, M.D Baltimore Medical College, professor of chemistry, French Greek and Latin in St Joseph's College, Irvington, near Baltimore, and formerly associated in the work of the Pasteur Institute, New York City died at his home in Baltimore, February 21, from pneumonia, after an illness of less than a week, aged 45

C A. Elliott, M.D Kentucky School of Medicine, Louisville 1852, for many years a practitioner of Ballard County and later of McCracken County, Ky, a member of the McCracken County Medical Association, died at the home of his daughter in Woodville, Ky, February 22, from senile debility, after an illness of several years, aged 79

Thomas P McDonald, M.D University of Pennsylvania, Department of Medicine, Philadelphia, 1891, a member of the Medical Society of the State of California, of the Nevada State Medical Society and the Washoe County Medical Society, died at his home in Reno, February 1, from pneumonia, aged 45

Ezra K. Friermood, M.D Rush Medical College, Chicago, 1869, a member of the American Medical Association, a veteran of the Civil War and a practitioner of Cass, Howard and Miami counties, Ind., for 38 years died at his home in Greentown, after an operation on the liver, February 18

Curtis A. Burwell, M.D University of the South, Medical Department, Sewanee, Tenn., 1901, a member of the American Medical Association, and a promising young physician of Salem, Va., died at his home in that city from pneumonia, February 16, after an illness of seven days, aged 30

Harold Abbott Wood, M.D Tufts College Medical School, Boston Mass., 1906, formerly interne of the Children's Hospital Boston and later an interne at St Joseph's Hospital, Providence, R. I., died in that institution from pneumonia, February 6, after an illness of one week, aged 26

Sherwood B Ives, M.D College of Physicians and Surgeons in the City of New York 1896, formerly assistant surgeon at the Presbyterian Hospital, New York City, died as the result of an accidental gunshot wound, self inflicted at the Morley Ranch near Datil, N. M., February 16, aged 37

Robert B Bedell, M.D Medical College of the State of South Carolina, 1854, a member of the state and county medical societies, and a prominent citizen of Lee County, Ala. died at his home near Farmville, February 13, after an illness of three weeks, from pneumonia, aged 72

Robert Henry Davis, M.D New York University Medical College, 1856, Faculty of Medicine of Queen's University and Royal College of Physicians and Surgeons, Kingston, Ont., 1888, sheriff of Haldimand County, Ont., died at his home in Cayuga February 12, aged 79

William Russell Elder, M.D Berkshire Medical College, Pittsfield, Mass., 1847, one of the oldest practitioners of Terre Haute Ind., and a veteran of the Civil War died February 21, at his home in Terre Haute from senile debility, after an illness of five months, aged 82

Herbert B Williams, M.D University College of Medicine Richmond, Va., 1903 a member of the state and county medical societies, of Gladys, Va died at St Andrew's Home Lynchburg Va from pneumonia, February 20, after an illness of several weeks, aged 29

Franklin Robert Williams M.D University of Louisville (Ky.) Medical Department 1892, a member of the American Medical Association, of Kingsbury, Texas, died in San Antonio Texas from exhaustion March 21 1906, after an illness of five days, aged 45

Samuel A. McDougall, M.D Albany (N. Y.) Medical College 1857 one of the founders of the Massachusetts Dental Society and a member of the state and county medical societies died at the home of his daughter in Jamaica Plain, February 8, aged 76

Thaddeus T Weatherly, M.D New York University Medical College 1861, surgeon of the Sixth Alabama Infantry in the Confederate service during the Civil War, died at his home in Bennettsville S. C., February 13, after an illness of several months aged 70

John William Barker, M.D Medical Institution of Yale College New Haven Conn 1860 medical examiner in Woodbridge, Conn for several years died at his home in Woodbridge February 16 from pleurisy, after an illness of one week aged 72

James Clarke Thomas, M.D College of Physicians and Surgeons in the City of New York 1868 of New York City, died in the Good Samaritan Hospital Los Angeles Cal., February 20 from pneumonia after an illness of one week aged 63

John C Howe, M.D Laval University Medical Department Quebec 1886 government immigration medical inspector at Quebec and one of the best known practitioners of that city, died at his home, February 2 suddenly, from heart disease, aged 47

Joseph J O'Shea, M.D Bellevue Hospital Medical College New York City 1896 a medical inspector of public schools of Paterson N. J., died at his home in that city February 20 from tuberculosis after an illness of three months aged 33

John Samuel Wilson, M.D Medical College of Georgia Augusta 1846 a surgeon in the Confederate Army during the Civil War, died at St. Joseph's Infirmary, Atlanta, Ga. February 11, from arteriosclerosis after a long illness, aged 78

William Neely, M.D Jefferson Medical College Philadelphia, 1847, for many years a practitioner of Stark County, Ohio, died at his home in Wichita, Kan., February 15 from senile debility, after an illness of several weeks aged 87

David E Matteson, M.D Western Reserve University Medical Department, Cleveland, 1873, a member of the state and county medical societies died at his home in Marion Ind., February 26, from pneumonia, after a short illness aged 56

Joseph W Mann, M.D Cincinnati College of Medicine and Surgery, 1896, of Cincinnati for the last eight years assistant physician of Longview Hospital died in Christ's Hospital Cincinnati, February 23, after a brief illness, aged 42.

Frank W Talley, M.D University of Pennsylvania, Department of Medicine, Philadelphia 1887 for ten years gynecologist at St Agnes Hospital Philadelphia died from nephritis, at his home in Philadelphia February 16 aged 41

Paul C Yates, M.D St Louis (Mo.) Medical College 1861, a member of the state and county medical societies a surgeon in the Confederate service during the Civil War died at his home in Neosho Mo February 18 aged 70

Frank J Moses, M.D Regents of the University of New York State formerly surgeon in the Confederate service for fifteen years a practitioner of New York City died at the home of his sister in Washington D. C January 19

Alvin R Alley, M.D Medical College of the State of South Carolina Charleston, 1869 a Confederate veteran died at his home in Atlanta Ga., February 21, from cerebral hemorrhage after a short illness, aged 63

William J Owsley, M.D University of Louisville Medical Department 1875, at one time township trustee, died at his home in Thorntown Ind from malignant disease after an illness of several months aged 55

George Herbert Nichols, M.D Homeopathic Medical College and Hospital New York City 1886 of Williamsburg N. Y. died February 17, at Stamford Conn., from appendicitis after an illness of eleven weeks aged 43

Robert F Wayland, M.D University of Virginia Medical Department Charlottesville 1847 for more than fifty years a resident of New Franklin Mo., died at a hospital in St Louis February 8, aged 84

Patterson Leonard McKinnie, M.D Rush Medical College Chicago 1872 a retired practitioner of Evanston Ill. surgeon during the Civil War died at Riverside Cal March 3 from heart disease, aged 62

Olcott C Orendorff, M.D University of Pennsylvania Department of Medicine Philadelphia 1862 died at his home in Middlefield N. Y. February 12, three weeks after a surgical operation aged 76

Mark R Cassady, M.D Medical College of Georgia Augusta 1858, of Thomasville Ga. died at Bronson Fla. where he had gone to spend the winter, February 17 from pneumonia, aged 77

Jacob Greenawalt, M.D University of Pennsylvania, Department of Medicine, Philadelphia 1870, died at his home in Pittsburg February 19 after an illness of five days aged 71

Joseph A Loeb, M.D Yale University Medical Department New Haven 1903 died at his home in Stamford Conn. February 24 from typhoid fever after a short illness aged 29

C P Kennedy, M.D Tennessee Medical College Knoxville 1902 of Wildersville Tenn died at the home of his parents in Knoxville, Tenn recently, from tuberculosis aged 30

Calvin D Vilas, M.D University of Vermont College of Medicine Burlington 1846 died at his home in Lake City Minn February 18 after an illness of several years, aged 81

Emerson S Northup M.D New York Homeopathic Medical College and Hospital New York City 1879 a veteran of the Civil War died at his home in Los Angeles recently

John Robert Berry, M.D University of Maryland School of Medicine Baltimore 1893 died at his home in Baltimore February 7 after an illness of two months aged 37

William S B Poole, M.D Western Reserve University Medical Department Cleveland died at his home in Ruff Dale Pa recently from dropsy after a long illness aged 52

H Russell Burner, M.D Eclectic College Philadelphia 1870 died at his home in Los Angeles Cal. February 13 from cardiac

William E Fifield M.D College 1876 died at his home after an illness of a year a

Benjamin R. Bevier, M D College of Physicians and Surgeons in the City of New York, 1849, died at his home in Napanoch, Ulster County, N Y, February 22, aged 75

Louis L Laronge, M D Homeopathic Hospital College, Cleveland, 1893, died at his home in Cleveland, February 25, from dropsy, after a lingering illness

William Patterson Biles, M.D Eclectic Medical Institute, Cincinnati, 1879, died at his home in Carlyle, Ill, February 18, aged 56

William Merchant, M.D Lewiston, 1882, died at his home in Otisville, Mich., February 18, from cerebral hemorrhage, aged 55

Stephen D Meserve, M.D Miami Medical College, Cincinnati, 1857, died at his home in Robinson, Ill, January 27, aged 80

William H Hodgson, M.D Royal College of Physicians, London, 1866, died in Mattoon, Ill, February 18, aged 73

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer s name and address, but the request of the writer not to publish name or address will be faithfully observed.

DIFFERENTIATION OF TUBERCULAR ARTHRITIS AND RHEUMATIC ARTHRITIS

—— Feb 18 1907

To the Editor —Among the questions recently asked by the Board of Examiners of Delaware (THE JOURNAL Jan 26, 1907, p. 365) the following was given under practice of medicine Differentiate tubercular arthritis and rheumatic arthritis This subject has been a stumbling block to me for a long time, and any information that will aid me in making a differential diagnosis will be appreciated W F T

ANSWER —Although there is considerable evidence pointing to the specific nature of rheumatism, this evidence is not yet accepted by all observers as conclusive. Nevertheless while the investigators are determining the existence or non-existence of a particular microbe or microbes which give rise to the clinical symptom complex or syndrome of articular rheumatism the existence of such a syndrome may from a clinical view point, be accepted This clinical syndrome thus provisionally accepted possesses two features which may be considered characteristic. These are First, the involvement of many joints (polyarticular), the joints involved being affected either simultaneously or consecutively and second the facility or rapidity with which all symptoms may disappear from a joint apparently extensively involved In just so much as the case fails to possess these characteristic features do the chances of it being rheumatism diminish, so that when we have to deal with a persistent arthritis of but one joint (monarticular) this fact alone is presumptive evidence that the case is not one of rheumatism As there is no possibility of confusing articular rheumatism possessing the above-mentioned features with tubercular arthritis, the question can only be considered to refer to arthritis of the monarticular type. An arthritis may be produced by an infection with a variety of micro-organisms so that the real diagnosis consists not in determining the presence of the joint inflammation which is usually seen at a glance but in determining the particular kind of infection which is present in the joint. The appearances of the joint are not always characteristic, hence the particular kind of infection must often be surmised from the antecedent or concomitant circumstances of the case or demonstrated directly by bacteriologic methods Thus the typhoid bacillus may produce an arthritis in connection with or following typhoid fever, the streptococci in scarlatina Pfeiffer s bacillus in influenza the gonococcus in connection with a recent gonorrheal infection the pneumococcus in pneumonia or a general pneumococci infection the staphylococci in tonsillitis or furunculosis etc. the *Spirochæta pallida* in syphilis the tubercle bacillus in tuberculosis etc. etc. These infections are almost always of the monarticular variety and may assume an acute or a chronic course. The import of this apparent digression from the main issue of the question is to point out that, excepting those cases due to trauma and the so-called arthropathies practically all cases of arthritis that have been carefully investigated have been found to be due to some of the well known varieties of infection and it has not yet been demonstrated that there is a particular form of monarticular arthritis due to a specific organism which is entitled to the term rheumatic arthritis although the term is unfortunately but too often applied to almost any form of joint inflammation. The real question becomes therefore how to distinguish tubercular arthritis? It occurs usually in young subjects and affects most frequently one of the large joints knee hip elbow ankle It is slow in its onset and runs a chronic course As in the large majority of the cases the trouble is primarily osteal, the early symptoms are rather juxta articular than articular, an indefinite pain a slight limp beginning limitation of motion of the joint. When the joint proper becomes involved the symptoms are more pronounced, the pain is increased there are spasmodic contractions of the muscles particularly at night the joint becomes fixed the synovial folds are palpably thickened, the whole joint is enlarged, which enlargement becomes more apparent owing to the rapid atrophy of the neighboring muscles etc. When the synovial membrane becomes markedly thickened by reason of the tubercular granulations, it has a characteristic pseudo-fluctuating feel If the case progress from bad to worse, tubercular abscesses form which eventually open leaving discharging sinuses The general health always declines from the prolonged suffering and constant slow absorption of toxins so that the whole case presents a picture which can scarcely be mistaken for any other condition

THE RUSSO 'REACTION"

CINCINNATI OHIO, Feb 23 1907

To the Editor —In THE JOURNAL February 16 page 626 it is stated, quoting Cousin Costa and Gandy that the Russo reaction' is due to the admixture of the blue with the yellow urine As to the value of the Russo 'reaction in the early diagnosis of typhoid I am as yet unwilling to give an opinion. I do not believe however that the reaction is due to the mere color mixing In the last two years I have had my classes in urinalysis experiment with the reaction in no less than a hundred cases both normal and febrile in which latter we would have to deal with urine more or less highly concentrated In each instance several control tests were made The blue was used in 1/10 per cent. solution four drops of which were added to about 15 c.c. (3 drams) of urine. In only one non typhoid case did the typical emerald green appear although highly concentrated urine from other diseases was used On the other hand some of the typhoid samples were so highly concentrated that instead of being yellow they were of a decided reddish cast and red and blue mixed will not produce emerald green or any other kind of green In one instance some typhoid urine was mixed with a number of other samples (previously negative), and the typical emerald green appeared I have made this test so frequently with a typhoid urine and other urines of very nearly the same concentration (measured by the specific gravity) and color simultaneously, that merely color mixing does not satisfactorily explain the phenomenon to me. WILLIAM H SMITH, M.D

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U S Army, week ending March 2, 1907

Morris S J asst. surgeon granted four days leave of absence about February 26

Wakeman Wm J surgeon sick leave of absence further extended one month

Shepard J L., asst. surgeon advanced from grade of first lieutenant to that of captain from February 21

Steer S L, asst. surgeon, granted three months and fifteen days leave of absence

Ashford, B K. asst. surgeon, detailed member of examining board to determine the results of preliminary examination of applicants and for final examination of applicants for final examination of candidates for admission to the Medical Corps of the Army vice Capt. Harry L. Gilchrist, asst. surgeon hereby relieved

McCallum, Francis M, contract surgeon left Fort D A Russell Wyo on leave of absence for one month

Porter Elias H contract surgeon left Fort Logan H Roots Ark for duty at Fort Clark Texas

Sievers Robert E, contract surgeon relieved from duty at Fort William Henry Harrison Mont and ordered to accompany the 25th Infantry to the Philippine Islands for duty

Hayes Melville A, contract surgeon relieved from duty in the Department of the Columbia, and ordered to Washington, D C for annulment of contract.

Long Charles J dental surgeon left FortAssiniboine Mont. and arrived at Fort William Henry Harrison Mont. for duty

Whinnery Jean C dental surgeon returned from Fort Liscum Alaska to Fort Wright, Wash for duty

Brooks John D contract surgeon order for Fort Sam Houston Texas revoked

Hughes, Leonard S contract surgeon returned to San Francisco from leave of absence and ordered to duty at Depot of Recruits and Casuals Angel Island Cal

Holmes Thomas G contract surgeon relieved from duty at Fort Meade S D and ordered to Fort Sill Okla for duty

Branch Frederick D contract surgeon order for Fort Preble Maine revoked will proceed home East Springfield, N Y for annulment of contract

Miller William G contract surgeon relieved from treatment at the Army General Hospital Washington Barracks, D C and ordered to his home New Castle Pa for annulment of contract

Allen Ira A. contract surgeon returned to duty at Fort Dade Fla. from leave of absence

Greenwell Samuel A contract surgeon relieved from duty at Fort Barrancas Fla. and ordered to his home Cleburne Texas for annulment of contract.

Gregory Verdo B contract surgeon relieved from duty at Fort Adams R I and ordered to proceed to his home Janesville Wis for annulment of contract.

Navy Changes.

Changes in the Medical Corps, U S Navy, for the week ending March 2, 1907

Lumsden G P medical inspector ordered to the Naval Recruiting Station Indianapolis

Surgeon H C Curl detached from special duty in the Bureau of Medicine and Surgery, Navy Department, and ordered home to wait orders

Odell H E surgeon, commissioned surgeon from Sept. 6 1906

Michels, R. H., P A. surgeon commissioned P A. surgeon from Oct. 8 1906

Bogert E S Jr surgeon detached from the *West Virginia* and ordered home.

Marsteller E H surgeon detached from the *Franklin* and granted sick leave for three months

Reeves I S K. P A. surgeon discharged from treatment at the Naval Medical School Hospital Washington D C and ordered to the *Franklin*

Hamar A pharmacist, discharged from treatment at the Army General Hospital Fort Bayard N M and ordered home to wait orders.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Feb 27 1907

Sprague, E. K., P A. surgeon granted leave of absence for two days

Boggess, J S P A surgeon relieved from duty at Stapleton N Y and directed to report to the chief medical officer Ellis Island, N Y for temporary duty after which to proceed to St John, N B for exclusive duty in connection with the examination of aliens

Creel, R H asst. surgeon granted leave of absence for one month.

Miller W W asst. surgeon granted leave of absence for twelve days from February 19 on account of sickness

Bullard, J T acting asst. surgeon granted leave of absence for 30 days from Feb 21 1907

Goldsborough B W acting asst surgeon granted extension of leave of absence for 14 days from February 18

McConnell F F acting assist surgeon granted leave of absence for 30 days from February 25

Morris G A pharmacist department letter of Jan 31 granting leave of absence for 15 days amended to read for 11 days only

RESIGNATION

Mr A. M. Thomas resigned as pharmacist of the third class, effective February 23

Woods C H pharmacist, removed from the service effective February 28

Health Reports

The following cases of smallpox yellow fever cholera and plague have been reported to the Surgeon General Public Health and Marine-Hospital Service during the week ended March 1 1907

SMALLPOX—UNITED STATES

California Los Angeles Feb 2 9 2 cases
Georgia Augusta Feb 12 19 6 cases
Illinois Castleton Jan 12 2 cases Chicago Feb 16-23 2 cases Galesburg Feb 9 16, 11 cases Jacksonville 11 17 3 cases
Indiana Elkhart Feb 9-16 3 cases Indianapolis Feb 10 17 8 cases Lafayette Jan 27 Feb 4 2 cases Feb 4 18 1 case South Bend Feb 9-16 2 cases Vincennes Feb 9-16 1 case.
Iowa Mahaska County Oskaloosa included May 28 Feb 22 141 cases
Kansas Kansas City Feb 9-16 3 cases (imported)
Louisiana New Orleans, Feb 9 16 10 cases (5 imported)
Mississippi Natchez, Feb 9 16 3 cases
Missouri St Joseph Feb 9 16 30 cases St. Louis 1 case
New York New York Feb 9 16 2 cases
Ohio Cincinnati Feb 16 22 2 cases
Washington Spokane Feb 9-16 12 cases
Wisconsin La Crosse Feb 9 16 2 cases Milwaukee Jan 26 Feb 2 4 cases Feb 9-16 4 cases 1 death

SMALLPOX—FOREIGN

Africa Lorenço Marquez Dec 1 31 1 death.
Brazil Pernambuco Jan 2 15 68 deaths.
Canada New Brunswick Feb 21 present Nova Scotia Glasgow Feb 9 16 17 cases Truro present
Chile Coquimbo Jan 12 present Iquique Jan 12 present
France Paris, Jan 26-Feb 2 5 cases
Great Britain Bristol Jan 26-Feb 2 1 case
India Calcutta Jan 5-19 41 deaths Rangoon Jan 5 12 2 deaths.
Mexico Vera Cruz Feb 2 9 1 case
Netherlands Rotterdam Feb 2 9 1 death
Russia Moscow Jan 26-Feb 2 1 case Odessa Jan 19-Feb 2 48 cases 6 deaths St Petersburg Feb 12 26 3 cases 1 death
Spain Barcelona Jan 21 31 6 deaths.
Turkey in Asia Beirut Jan. 26 Feb. 2 present.

YELLOW FEVER.

Mexico Vera Cruz Feb 26 1 case
Venezuela La Cuayra Jan 9 2 cases
West Indies Trinidad Port of Spain Feb 4 5 1 case 1 death

CHOLERA—INSULAR

Philippine Islands Provinces Jan 5 12, 2 cases 2 deaths

CHOLERA—FOREIGN

Ceylon Colombo Jan 15-22 4 cases 4 deaths
India Calcutta Feb 2 19 526 deaths Rangoon Jan 2 12, 15 deaths.

PLAGUE—INSULAR.

Hawaii Honolulu Jan 29 1 death (on S S *America Maru*)

PLAGUE—FOREIGN

Australia Brisbane Dec. 15 22 1 case 1 death
Chile Antofagasta Jan 1-, 6 cases 4 deaths
India General Jan 5-12 1,945 cases 10 343 deaths Bombay Jan. 15-22 43 deaths Calcutta Jan 5 19 26 deaths Rangoon Jan. 5 12 17 deaths
Japan Matsuyama, Jan 14 present Osaka present.
Peru Callao Jan 19 1 case Catacaos Jan 8 - cases Chilayo 7 cases Lambayequa 1 case Paita 1 case San Pedro 7 cases Trujillo Jan 8 6 cases

Association News

NEW MEMBERS

List of new members of the American Medical Association for February, 1907

ALABAMA.

Black, W F Sayreton.
Moore J A. Birmingham
Shipp M G Albertville
Speir P V Durman
Tippin P H M Brewton
Vance J G Warrior

ARIZONA

Hawley C I Bisbee

ARKANSAS

Bathurst W R Little Rock
Ogden M D Little Rock
Pate C N Ft. Smith
Stevens C C Blytheville

CALIFORNIA.

Brown Rexwald Santa Barbara
Crawford W T Fowler
Doane I L Red Bluff
Keith W E. San Jose
Koepke F H Watsonville
Rowell H N Berkeley
Snyder G S San Francisco
Sumner Percy San Quentin
Walsh F D Loyalton

COLORADO

Manns Rudolph Denver
Schenck D S, La Jara
Scholz S B Jr Denver
Todd, J C Denver

CONNECTICUT

Adam J G, Canaan
Blank, E I Bridgeport
Taylor Maude W Hartford

DISTRICT OF COLUMBIA.

McPherson D M Washington

FLORIDA

Neal T A Sanford

GEORGIA

Bullard W M Monticello
Cole J F Carrollton
Dallas D Q Davo
Faulk G A Alapaha
Hamilton C., Rome
Hardman W B Commerce
Wilson Samuel Watesville
Woods J F McDonough

ILLINOIS

Bain W G Champaign.
Cherry T F Cowden
Cleland J S Swanwick
Cook Mary L. Chicago
Cunliffe R A. Chicago
Danforth W C. Chicago
Gordon L. I Chicago
Johnson W W Franston
Kuhn L. R P Fairbury
Lockwood C R Atwood
McClelland S I Decatur
McNair O H I Batavia
Moore G H Joy
Needham F S., Chicago
O'Shea David Chicago
Otradovec, Joseph Chicago
Poos C H Trenton
Reuss A L. R. Belleville
Weber G H Peoria

INDIANA

Austin M A Anderson
Bailey H T., Tittles
Heiland, H J., Indianapolis
Kennedy C M Carmel
Scott J W C Columbia City
Weiss H C Rockport

INDIAN TERRITORY

Cornell Martin Chickasha
Redfearn R T Sallisaw

IOWA

Anderson L K. St Charles
Bowser W F *Buffalo*
Conkling W S Des Moines
Cresap R V Bonaparte
Hobby E I Iowa City
Lacey T B Jr Council Bluffs
McLaughlin W H Webster
Nordgren Louise McCallsburg
Sickler Daniel Ogden
Tubbs R B Council Bluffs

KANSAS

Bennett R M Mound Valley
Chapin Charles Frontenac
Dickinson Amelia A Pittsburg
Evans E. A Conway Springs
Fairbanks W I Kansas City
McKnight G C, Hiawatha
Millard S T Carbondale
Newton L A Chicopee
Revell A T Scammon
Smith H H Highland

KENTUCKY

Alexander J M Fulton
Dabney A S Golden Pond.
Ferguson C. N Nebo
Finley A. I Risley
Higdon L. S Leonia
Honaker Harry I Hillsboro
Peddicard Frank L. Lester
Shaw C W Alexandria
Stites I M, Hopkinsville
Usher H V Oscar
Wolfe J G Frances

LOUISIANA

Dorrestein C A M New Orleans
Durel W J Covington

MAINE

Clough G H Dexter
Leach C H Lincolnville
Pritham I J Greenville

MARYLAND

Bordley James Jr Baltimore
Chaney Thomas M Chaney
Rich H L. Fort Deposit

MASSACHUSETTS

Clark J D Auburndale
Davis F L. Springfield
Mackerrow H G., Worcester
Patterson Alice M Leominster
Pike W C Boston
Smith J H Boston
Thompson C H North Adams

MICHIGAN

Beleman Joseph Detroit
Bradshaw B C Marvill
Kennedy R L. Howell
Ostrander Herman Kalamazoo

MINNESOTA

Bong J H., Jasper
M Arnold
R Ivanhoe
I I

ISS
V

MISSOURI
Bennett, E C Bolckow
Bradshaw J T, Montrose
Chamberlain O M C Rocksport
Dunham S A. Kansas City
Laton J A, Belgrade
Upperson H L Browning
Uries W A, St. Louis.
Goodrich E E Crane
Gordon F N St. Louis
Greenwood G H Fredericktown
Haden, J W Pleyna
Jefferies C O Savannah
John Gomer Wilcox.
Johnson H C Meadville
Large S D, Hopkins
Larrabee J A Barnard
Lester R B, Desloge
Martin H L Kansas City
Nash W H St Louis
Northcutt J R Knox City
Patterson W R, Tipton.
Perkins G B Elvins
Safford W G Tarkio
Sargent D A Hopkins
Senseney E T, St Louis
Shelton C W Mt. Vernon
Simmons B B Oregon
Skinner E H Kansas City
Smith R M Kansas City
Talbot C W Nevada
Tipton P L, Caruthersville
Wood W S Oregon

MONTANA
Flinn, F M Libby
Patterson E B Phillipsburg

NEBRASKA.
Edmiston A W Omaha
Young, W R, Ansley

NEVADA
Sanford Louise Reno

NEW JERSEY
Gordon A L, Burlington

NEW YORK
Atwood C E, New York City
Austin S E Auburn
Baird A W New York City
Blank, M I, New York City
Brinsmade D B New York City
Bullowa J G M, New York City
Campbell G B New York City
Carmer M E Lyons
Clarke H E. Glens Falls
Denton M. P, New York City
Frink C A., New York City
Gignoux J E New York City
Hamlen G D New York City
Haubold H A New York City
Hedden A. W Syracuse.
Hurlbut L. R Lockport.
Keator H M New York City
Livermore I W Gowanda
Lockwood G R New York City
May W R, New York City
McGrane M. A., Troy
McWilliams C A New York City
Mitchell Sidney Jr Saranac.
Murray Janet Schenectady
Pisko Edward, New York City
Racoosin Wm Centerville
Roseboom J L Rochester
Safford J E Stamford.
Satterlee R H Buffalo
Scott G D New York City
Searing B H., New York City
Schroeder Wm Jr New York City
Slocum F W Camillus.
Smith A H Camden
Smith G W Utica.
Spingarn Alexander Brooklyn
Steinach Wm New York City
Strang W W New York City
Taylor D M Edwards
Thurber S W New York City
Valentine J J, New York City
Waugh D W Brooklyn
Westlake A J Elmira
Whitwell J F Buffalo
Wilber H C Pine Plains

NORTH CAROLINA
Foust, I H Salisbury
McKay J F Lillington
Moore B S Charlotte
Newell H A Louisburg
Stanton D A High Point

NORTH DAKOTA
MacLachlan T M Bismarck
Pryse T S Dawson
Stewart M A Omemee

OHIO
Baer Mary Canal Dover
Blackburn, Ella, New Vienna
Blackford R A. Martins Ferry
Bixell P D Pandora
Carmedy M. H, Painesville
Dewey H R., Bellevue.
Hussey M. E, Sidney
Lange, Sidney Cincinnati
Lott, F S, Columbus
McAllister J L, Black Fork
Mitchell J A, Newark.
Souder R L, Ada.
Vos Arthur Cincinnati
Wells C H, Summit Station

PENNSYLVANIA
Astley G M., Philadelphia
Brister Samuel Philadelphia
Brown H McV Philadelphia.
Burns D W Honesdale
Cashman E W York Springs
Davis P J Scranton
Faught, F A Philadelphia
Grander F L. Forest City
Griffith M F Monessen
Hellman R M Leechburg
Krall J T Philadelphia
Ingram C H Pittsburg
Kane A Pittsburg
Lamon G T, New Kensington
Price J J Olyphant
Stephens, T D Penn Run
Vastine J M Catawissa
Washburn Clayton, Susquehanna

RHODE ISLAND
Ferguson J B Providence

SOUTH CAROLINA
Green C I Orangeburg
Stroud D C Marietta

SOUTH DAKOTA
Sandmann G A., Parkston
Seapy J A Geddes
Swett C H Presho

TENNESSEE
Heffernan J L Jellico
Sumners W P., Fayetteville

TEXAS
Beckmann A Oldenburg
Blythe W H Mount Pleasant.
Bush, J A, Winnsboro
Combs R. L, Kerrville
Dorset, D H., Thurber
Ehlinger, Otto La Grange
Gillette W R., Cuero
Gowen J D, Queen City
Gregory C L. Terrell
Johnson, R A. Flatonia
Lowry W E Laredo
Lipscomb C D, Quitman
Mitchell R E, Campbell
Morgan E. H Granbury
Murray E C Houston
Perry G F Hamilton
Sauvignet, E H Laredo
Thornton Henry Pittsburg
Wilder J H Hooks
Wisdom W E Jefferson
Wood Martha A. Galveston
Zoesper J S Ammansville

UTAH
Richards R. T Salt Lake City
Rothwell W H, Murray

VERMONT
Townsend W W Rutland

VIRGINIA.
Carter H P, McKenney
Godwin I R. Pincastle
Greiner A B Rural Retreat
Haislip G W Lorton Valley
Henderson T B Wakefield
Sloan J W Richmond

WASHINGTON
Palamountain, W B, Colfax.

WEST VIRGINIA
Booher W T, Bethany
Cherry H J Coketon
Harris L. N Mill Creek
Lantz, Percival Alaska
Slater C. N Clarksburg

WISCONSIN
Bassett V H Wauwatosa
Blanchard A. C Linden
Brown E B., Horicon
Kahn Joseph Milwaukee
Lindores J D Stevens Point
McKee F W Richland Center
Scholz, G M F., Milwaukee
Watterson W H Fox Lake

WYOMING
Chambers Oliver Rock Springs

HAWAII
O'Neill M J Pleele Kauai

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION CONTRACT PRACTICE INSURANCE FEES MEDICAL LEGISLATION, ETC

METHODS AND RESULTS OF ORGANIZATION WORK IN KENTUCKY

J N McCORMACK, M.D
Chairman of the Committee on Organization of the American Medical Association
BOWLING GREEN, KY

As is generally known, I have been working outside of my own state almost constantly for the past five years When the opportunity came for me to make an itinerary here, the importance and possibilities were fully realized by all in authority in the State Association, and every one lent a willing hand

PRELIMINARY WORK

Dr Bullitt, state secretary and editor, took up the matter systematically in the *Kentucky State Medical Journal*, explained all our plans and purposes, and showed how and why it was a work of much practical importance in the daily life of every physician and citizen He urged every county society to discuss the matter freely, and to indicate to its councilor where each meeting could be held to the greatest advantage

When the profession had been thus fully advised, a meeting of the council and all other officials of the State Medical Association was called to work out the details, and especially to solve the difficult problem of inducing the laity to come out to hear a doctor talk I attended this meeting and gave to these earnest men, each of them my personal friend and co worker in many legislative and other contests, the benefit of *my experience* in other states, and explained fully what was expected of them and of their county societies, if the best results were to be secured After full discussion it was decided to confine the appointments to counties where the profession was already so well organized as to give promise of good audiences of both the profession and public, without regard to the size of the town or city It was also decided, in order that I might speak in as many counties as possible, and because I had already met the societies more than once in almost every county, that afternoon and evening meetings should be held daily, at easily accessible points, and that all of these should be for the laity All these things understood, and the places of the meetings in each district decided, the order and dates *of the appointments were courteously left for me to arrange* with the aid of a well informed railway passenger agent The itinerary was published in the next issue of the *State Journal*, marked copies of which were sent to every physician of the state whether a member or not, with ringing editorials urging each of them to arrange to attend one or more of the meetings with their leading lay friends and patrons As will be seen, the itinerary covers all except the southwestern and northeastern districts, which are to be visited at a later date

About two weeks before the meeting in his county or district, each physician, whether or not a member, or even eligible, received a personal letter from Dr Bullitt, enclosing the itinerary, urging him to attend and to bring his wife and *influential patrons* A few days later, he received a similar letter from his councilor, couched in different terms, followed, later on, by one from the secretary of his county society, all with the same end in view All these letters were prepared in Dr Bullitt's office, and sent with addressed and stamped envelopes to the respective officials named, and needing only their signatures before mailing I have licensed every physician in Kentucky, of every school or system, and know most of them personally About two days before the meeting in his district or county, each of them received a personal letter from me, telling him why and how he ought to try to make the meeting a success *I told him that I expected in my talk to* explain fully what should be the relations between the doctors and the people, and, in a plain, practical heart to heart way, would show that every true interest of theirs and ours were inseparable, and that I would show that the poverty so prevalent in the profession is far more important and dangerous to

them than to us, illustrating this by example after example, from the experience of a long and busy life I told him that I could only hope to make the meetings helpful to him if he and his patrons, good men and women, were present, but that, if he would get them there, I promised in advance to make it worth more than a month's practice to him, and that this would be one of the least of the benefits It was easy to reach the profession in this way because both the state association office and that of the State Board of Health, which work hand in hand in everything, have a constantly revised card index register, so that practically none would be overlooked The aid of the newspapers was also enlisted in every county This was the easier because the press has co operated in all the public health work here to an extent probably not true in any other state

All this cost time, effort and considerable money but the council considered it an excellent investment, the result proved that they were wise in doing so They considered it as just as it was wise The American Medical Association generously proposed to meet all the direct expenses of a work undertaken solely for the instruction and uplifting of the profession and people of Kentucky It was known that I had never taken an application for membership in that Association, or a subscription for THE JOURNAL, and never intended to do so It was expected, on the other hand, that the membership in the county and state societies would be largely increased, and it was felt that no labor or expense should be spared to make the meetings successful Now for the outcome

THE MEETINGS

Of the forty four meetings arranged for, all but two were well attended, and the profession in these two counties broke down after the appointments were made Physicians came with their families and patrons, often from far off country districts and adjoining counties, and some of them attended two or more meetings Lawyers, teachers, ministers, editors farmers bankers, merchants, city and county officials, with their wives and daughters, made up the audiences, and took an active and intelligent part in the discussion which always followed my talk It was interesting to learn from the discussions, as well as privately, that no laymen of the thoughtful classes, those whose attendance was especially important, was ever present except on personal invitation from his physician, or a written one from the county society Many said they had read the newspaper notices and that these had done good in reminding them of the hour but all of them said they would have looked on it as a medical meeting a dry, technical lecture, and a good thing to keep away from but for the personal explanations of, and cards from, their medical friends

The circuit courts were in session at seven of the appointments and it was feared at first that on this account lawyers and court officials would be kept away In each instance after consulting the bar, the judge adjourned his court when the hour arrived, after announcing the meeting and urging its importance Always the judge either presided at the meeting or took an active part in the discussion A most gracious and gratifying instance of this kind occurred at Richmond where the appointment was for the afternoon A great will case was being tried and attorneys were present from distant parts of our own and other states Before noon Judge Benton, a great jurist, announced my meeting in his court room at 2 o'clock and that court would adjourn at that hour and urged that all be present to hear matters discussed of the most practical importance to every citizen and family The result was one of the largest and most appreciative audiences I have ever addressed Nor was this all I was to speak in Judge Benton's home city in the evening He took the train over with me gave his time to getting his legal and other friends out to the meeting, and took an active part in the discussion there

Appointments	Date	Hour of Speaking	Arrive	Route	Leave	Distance
Bowling Green	April 30 May	7 30 P M				
Glasgow	1	10 00 A. M	7 40 A M	L. & N	3 20 P M	25
Franklin	2	10 00 A. M	7 01 A. M	L & N	2 25 P M	70
Russellville	3	2 00 P M	7 35 A. M	L & N	7 10 P M	45
Elkton	4	2 00 P M	8 50 A M	L. & N	5 15 P M	35
Guthrie	4	7 30 P M	5 55 P M	L. & N	9 43 P M	11
Owensboro	5	2 00 P M	9 00 A M	L H & St L	8 40 P M	40
Morganfield	7	2 00 P M	9 45 A M	I C	5 14 P M	23
Henderson	7	7 30 P M	6 05 P M	I C	8 30 A. M	85
Princeton	8	2 00 P M	12 15 P M	I C	4 55 P M	47
Paducah	8	7 30 P M	6 10 P M	I C	7 45 A. M	41
Murray	9	10 00 A. M	8 59 A. M	N C. & St. L.	11 58 A. M	19
Benton	9	2 00 P M	12 30 P M	N C & St L.	7 32 P M	80
Madisonville	10	1 00 P M	11 35 A. M	L. & N	3 55 P M	80
Hopkinsville	10	7 30 P M	5 18 P M	L. & N	6 10 A. M	36
Elizabethtown	11	2 00 P M	11 35 A. M	L. & N	7 00 P M	144
Hodgenville	12	10 00 A M	7 30 P M	I C.	7 00 P M	11
Bardstown	14	2 00 P M	11 00 A. M	L. & N	6 08 P M	56
Springfield	15	10 00 A. M	7 05 P M	L. & N	12 00 M	20
Lebanon	15	2 00 P M	1 00 P M	Drive	10 14 P M	10
Stanford	16	10 00 A M	3 50 A. M	L. & N	4 15 P M	12
Lancaster	16	7 30 P M	5 13 P M	L. & N	9 15 A. M	6
Richmond	17	2 00 P M	2 00 P M	L. & N	4 10 A. M	110
Winchester	17	7 30 P M	5 00 P M	L. & N	7 10 A M	16
Mt Sterling	18	2 00 P M	9 43 A. M	L. & N	4 10 P M	75
Lexington	18	7 30 P M	5 10 P M	C & O	7 07 A. M	34
Cynthiana	19	10 00 A. M	8 24 A. M	L. & N	5 05 P M	14
Paris	19	7 30 P M	1 45 P M	L. & N	7 45 P M	—
Georgetown	21	2 00 P M	9 00 A. M	Interurban	4 00 P M	31
Versailles	21	7 30 P M	7 00 P M		9 27 A M	24
Somerset	22	1 00 P M	12 50 P M	Q & C	3 08 P M	100
Danville	23	1 30 P M	4 20 P M	Q & C	5 20 A. M	44
Harrodsburg	23	2 00 P M	7 50 A M	Southern Ry	5 55 P M	18
Lawrenceburg	23	7 30 P M	7 55 P M	Southern Ry	6 35 A. M	—
Shelbyville	24	2 00 P M	8 45 A. M	Southern Ry	4 15 P M	17
Taylorsville	24	7 30 P M	7 15 A M	Southern Ry	6 10 P	20
Owenton	25	1 00 P M	6 50 P M	L. & N	6 07 A M	17
New Castle	26	1 00 P M	10 09 A. M	L. & N	4 00 P M	7

THE FOUNDATION FOR THIS WORK

The professional and public sentiment which made possible the conditions indicated in the foregoing account had resulted from the systematic patient, persistent efforts of a few devoted men in every county for years often in the face of difficulties and discouragements which seemed insurmountable Eighteen years ago the medical law was so defective as to be only an annoyance and expense to reputable men, with practically no restrictions for the vicious classes, as is now the case in most states and Kentucky was a paradise for quacks The cities were full of fake medical institutes of every kind wonder working cure alls were announced under alluring headlines and pictures to make monthly visits to most county seats "for one day only," and nostrum vendors, with music and clog dancers, ridiculed and maligned the profession and fleeced the people, and these were looked on as things only to be endured as they still are in many states Under the leadership of a few men in each county as has been said, the profession was gradually awakened to a realization of its moral and political power and it was decided that these conditions were intolerable The physicians got in touch with the leaders of the dominant party in each county, especially with the lawyers and editors and explained that their work was unselfish that they only sought to protect the people from ignorant and dishonest pretenders, and to protect the profession from the odium brought on it by these classes They worked with and not in antagonism to, these leaders in the primaries so that members of the profession of both political parties could act as a unit and always quietly not only as becoming to a body of scientific men but also because the most effective work could be done in this way Thus in a few years it came about that the 4 100 medical men of Kentucky had more political power than any 2 000 other people in the state largely because the of every school or system were so united because it had been proved that they had no selfish ends or ambitions to serve, and quite as much so probably because they tactfully worked with and not against the political leaders not by brass bands or other ostentatious methods forehand and indulged in no idle boasts or threats afterward Doctors cooperate with doctors if they can be assured to the fact of possession and of the importance of proper exercise have no [illegible] in the community

for bringing it to bear, than all the other learned professions combined, and legislators, judges and other officials, ignorant or dishonest enough, usually the former, to pander to quackery, or to oppose the enactment or enforcement of beneficent measures for the protection to the best interests of the people, soon found themselves retired to private life, where they could think it all over, by an influence with the voters only the more powerful because it was intangible Still more important, honest, capable officials found that they were supported by the same quiet, confident power, and that an intelligent, fearless discharge of duty made a re-election or promotion easier and less expensive

Soon the outcome of all this was a new medical law which required every physician in the state to re register, and which left all the quacks outside of the breastworks, a carefully selected and fearless medical referee in each county, supervised the work and endorsed only reputable applicants, each of whom, as a part of his application, made oath that he had never been an itinerant or advertising doctor, and would never become such, if a certificate were granted him It was not a stronger or better law than most other states have, but it could be better enforced because it was supported by public sentiment, especially by the legal profession and press, and still more by a medical profession which knew by long training exactly what it was after and how to get it. The quack concerns, the Copelands, K. & K.'s, and others great and small, made a long and desperate legal fight to hold their ground The board and its individual members were plastered over with fake damage suits, but no inch was ever yielded, no time, concession or exception was even considered, and as soon as the laws could be construed by the courts of last resort, these quacks were driven from our border, and for fifteen years no itinerant or advertising doctor has been permitted to practice longer than was necessary to secure evidence for his indictment and conviction Of course, this law and the oath referred to do not apply to ethical professional cards

POLITICAL AND ETHICAL WORK.

This was a semi political work, and long antedated the reorganization of the profession on the Association plan This movement was most timely for Kentucky especially, as it gave system, permanency and a solid foundation in the county societies, to a reform which it would have been difficult to maintain otherwise The State Board of Health, which is also the State Board of Medical Examiners, has always considered itself in effect only the executive committee of the medical societies represented in its membership, it has been strictly a non partisan organization and, at the same time, paradoxical as it may seem, it is in the closest possible touch with both political parties In order to make this desirable status a certainty for all time, the law was so amended as to provide, when a vacancy occurs, that the society to which the place belongs should send in three names to the governor, from which list the nomination shall be made As the three medical members who, with the county judge, and usually the county attorney, compose the county boards of health, and the medical referees, are appointed by the state board, as professional appointments of all kinds are restricted to members of their society, and as most of the influential representatives of all the schools are members of their societies, the practical result has been not only a solid but an active profession back of both the medical and health laws, and of all legislation agreed on At present the work of the State Board of Health, the State Board of Medical Examiners, the State Medical Association, the *State Journal*, and the surgeon general are all conducted in the same office This is a great convenience, it coordinates the efforts and makes them more effective, but is being done at a personal sacrifice which may make its continuance impossible for a great length of time Even before this arrangement was made the policies and work of these bodies were always considered inseparable, and will be so continued under any circumstances

The osteopathic question gave our profession much serious concern Under the construction of the courts, the law made no provision for dealing with the matter and the osteopaths had obtained a strong and noisy following in the state before any plan of action could be laid out The solution reached was not ideal, but it has given entire satisfaction to all concerned. They have a representative on the board, an educated, capable man who insists that the adherents of his system shall come to the highest standards and be held to the most rigid observance of the law They take the same examination that all other applicants do, an absolutely secret and impartial one, and each of them takes an oath not to attempt to perform operations with the knife, or to administer drugs internally, and the same oath that all others do, not to advertise Gaining wisdom from our experience in this matter, and knowing of the neuropaths, vitopaths, naturo practics and similar cults and sects, our law now contains ample provisions for the examination of the adherents of any other system of healing now in existence or which may hereafter be discovered

As in other states, the question of regulating and raising the standard of medical education, and especially of the entrance requirements of students, has had the serious consideration of the board, the schools and the state association for several years Recognizing that the responsibility for the old system lay at the door of the entire profession, rather than the schools, as many superficial observers have been led to believe, that many of our best friends, in the best of faith, had invested almost their all of both money and reputation in these institutions, and that the reforms needed must come by evolution and consolidation, and not radically, every possible interest has united In this work, honest differences of opinion have arisen, as was natural between men of strong character and convictions, who had important interests to guard The schools often thought that the board was going too fast, and the board was equally sure that the schools were not moving fast enough It was always found that these differences could be easily adjusted by means of frequent, frank conferences, and that misunderstandings sprang up only when these were omitted For two years a certificate from the state examiner, elected by the board, has been required for students entering any college in or outside of the state, as a condition of recognition for such college, a rigid but fair examination is required for those without diplomas from recognized high schools or colleges, the economic course recommended by the Council on Medical Education has been made equally obligatory on all schools in or outside of the state, and it is believed that the grade of the examination for license has been equal to that of any other state Partly as a result of this conservative, helpful policy, probably, four of the schools have recently united into two, giving us three instead of five, and in every way the outlook is encouraging The same course has been pursued in dealing with the other schools or systems of practice The representatives of these schools have always been most efficient and cordial co workers on the board for the highest standards and for every true interest of the entire profession, and, although there has been the most perfect frankness about everything, no sectarian question has ever arisen for discussion

WORK DIFFICULT AND INCOMPLETE

If any one should get the impression from what has been said that it has been easy to do any or all of these things, and, with this idea, try to do it in his own state, he would make a great and most unfortunate mistake If he should get the impression that present conditions in Kentucky are satisfactory and the organization is completed, or half, or a quarter done, he would be still farther from the mark Each advance, each step forward, has required the united, patient, thoughtful labors of the leaders of the profession in every county, and none know so well as do these devoted men that the work is in its infancy, that we are just getting in a position to meet the responsibilities and reap the benefits of real organization for both the profession and people in a few localities Postgraduate schools, modest, but practical and effective, have been started in fourteen counties, and others are in contemplation, and joint meetings with the other vocations are being inaugurated. In other counties, with the highest class of men composing the profession, except as to legislation and such matters as the insurance question, which was practically settled in a fortnight, the leaders even have not awakened

to the importance and possibilities of organization, or to what it might be made to mean to them individually On investigation it nearly always develops that the causes for this are personal, usually between the local men, sometimes because others have attended and gained a prominence in the state work while they remained at home Exceptionally a few of the leaders, enough to mar the work in their own county, usually the very best of fellows personally and professionally, with only personal and local interests to consider or serve, failing to grasp the broader and more difficult problems confronting those charged with official responsibility for the time being, or not appreciating what has already been accomplished for them, their profession and the state by the very men and policies they condemn, on some suggestion of theirs being refused, with or without good reason, take offense where none was intended, nurse their grievance until it becomes real, and blindly do incalculable mischief, fortunately confined to their own locality and friends, with the same good intentions and cheerfulness as if they were going forward instead of backward

The only way to meet such difficulties, and all others which confront the profession, most of them from lack of training of students in regard to all these practical matters during the college course, is by practical, persistent, tactful work, never failing good temper, and even handed justice to every interest on the part of those charged with the responsibility of doing it, and the constant demand that medical schools shall give a practical course in business, ethics and organization, essentials in the every day life work of the physicians, to future students, or else close their doors Leading in all this in Kentucky is a devoted, self sacrificing board of councilors and state society officers excelled by no other state, and back of them, because of what has already been accomplished, is a profession probably more united and enthusiastic on the whole than can be found in any other state. With the head way already gained, under such a leadership, and with such a following everything desirable seems possible unless a slip is made somewhere Of all things most importance is attached to the fact that the state association, the county societies, the state and county boards of health and every other professional interest, are so dove tailed and interwoven that all work constantly together for the common good

A County Society's Work in a Rural District.

Dr Julius Noer, Secretary of Dane County (Wis) Medical Society, writes

"The Dane County Medical Society meets on the second Tuesday of each month in the Carnegie Library at Madison The membership now includes practically every licensed physician in the county Not more than two papers can be read at any one meeting Papers are limited to 20 minutes This gives ample time for discussion A commendable fraternal spirit prevails, and the usefulness of the society, both practically and scientifically, is unquestioned Among the practical things accomplished are The adoption of a fee bill of minimum charges for the entire county, the adoption of resolutions condemning contract or lodge practice, resolutions prohibiting the demanding or accepting of commissions for referring patients to surgeons or specialists Insurance examination fees have been fixed at $5 00 The work of our county society shows very clearly that the county organization can be made a very useful body, not only scientifically and clinically, but also as a social center and as an organization for dealing with questions of a purely business nature"

Dane County is a rural community without large cities, but this does not seem to interfere with the work of the society

To Censor Newspaper Reports

Resolutions, introduced by Dr Henry W Dewey, were adopted at the meeting of the Pierce County (Wash) Medical Society, held February 19 regarding the publication in the lay press of the description of operations, new treatments, reports of papers read at society meetings, medical interviews, etc except such facts as will benefit the public, and then not in connection with the names of physicians The secretary was instructed to preserve in a scrap book the articles or items appearing in the newspapers of Tacoma relating to physicians of the city and to give out to newspapers only censored reports of meetings

County societies in Montana are working for the adoption of two bills which have been introduced into the state legislature. The first provides for the establishment of a system of registration of births and deaths, while the second is an amendment to the present law creating the State Board of Health The registration law is similar to the law on this subject now in force in Pennsylvania

Society Proceedings

COMING MEETINGS

Medical Society of Missouri Valley Omaha Neb March 21 22 1907
American Association of Anatomists Madison Wis March 27 29
Med. Assn of District of Columbia Washington April 2
Tennessee State Medical Assn Nashville April 9
Mississippi State Medical Association Gulfport April 10
South Carolina Medical Association Bennettsville April 10
Medical Assn of State of Alabama Mobile April 16.
Florida Medical Association Tampa April 17
Medical Association of Georgia Savannah April 17

CHICAGO MEDICAL SOCIETY

Regular Meeting, held Feb 20, 1907

DR. C P CALDWELL in the Chair

SYMPOSIUM ON INFLUENZA

Cardiac, Pulmonary and Gastrointestinal Complications

DR JOSEPH L. MILLER said that influenza, probably of all infectious diseases, is one most frequently associated with some cardiac complication In the epidemic of 1889 and 1890 a large number of cases of cardiac trouble developed in elderly people who were subject to attacks of influenza The cardiac troubles which frequently arose were those which involved the myocardium Besides a bradycardia, he mentioned dilatation of the heart, palpitation, and attacks of angina pectoris The attacks of angina pectoris which not infrequently follow or occur during attacks of influenza are probably due to changes in the coronary vessels and are analogous to those found in diphtheria and scarlet fever

In young people the prognosis in the cardiac complications of influenza is usually good, as in myocarditis following diphtheria or other acute infections Recovery is the rule In elderly people, however, where the heart muscle is undergoing changes as the result of age, or in people who had a previous valvular lesion, an attack of influenza often leads to permanent trouble, and many date their cardiac incompetency from the time of the attack of influenza

The cough of influenza often occurs in intense paroxysms, almost like whooping cough, and may persist many weeks even after marked pulmonary signs have disappeared In the bronchitis of influenza there is a tendency to involvement of the lobes instead of the lungs Often there is an absence of the diffuse involvement which is found in ordinary bronchitis The sputum from patients with influenzal bronchitis is fairly typical it is large in amount, and made up largely of globules of pus about the size of a pinhead

The croupous pneumonia of influenza is rarely ushered in with a chill, it is more local, it may begin in two or three lobes at the same time which is unusual in ordinary croupous pneumonia It does not tend to involve a whole lobe at once, but there occur several foci in the lobe about which infiltration occurs These foci become larger until they coalesce and then an entire lobe is consolidated The sputum is purulent Over the involved lobe there is much less marked dulness there is less marked bronchial breathing less marked bronchophony than in ordinary croupous pneumonia Consolidation is not as complete There is much more cyanosis and dyspnea than in ordinary croupous pneumonia, due largely to the associated bronchitis It is unusual for an influenzal pneumonia to end by crisis In the majority of cases it ends by lysis extending over two or three weeks from the beginning of the trouble It is not infrequent to have temperature disappear by lysis and still there may be marked evidences of infiltration remaining The case clear up less rapidly than in ordinary croupous pneumonia

Occasionally pleurisy develops (without any evidence of infiltration of the lung) apparently on a bronchitis, and may take on a very rapid and fatal form The pleurisy may be bilateral, and the patient dies within a few days from rapid filling up of the thorax with sero purulent fluid

The presence of a moderate number of influenza bacilli does not establish the diagnosis of influenza Other factors must be considered.

In speaking of the disturbances of the gastrointestinal tract reference was made to the relation of appendicitis to influenza The reasons for belief in this relation are, first, the marked increase in the number of cases of appendicitis recognized at the time the epidemic of influenza first appeared Second, the frequency with which appendicitis occurs in people who suffer from influenza As to statistics bearing on this subject, Dr Miller finds in the St. Petersburg General Hospital, taking the month of November during the year 1889, when influenza was epidemic, that there were 917 cases of influenza and 10 cases of appendicitis In 1890 there were 98 cases of influenza and 12 cases of appendicitis, in 1893 there were 189 cases of influenza and 26 cases of appendicitis, in 1901 there were 323 cases of influenza and 33 cases of appendicitis In other words, while the number of cases of influenza has been much less than in 1889, the number of cases of appendicitis has been multiplied more than threefold The statistics of other hospitals were quoted to show the increase in the number of cases of appendicitis following influenza

Prophylaxis at the present time has been practically unavailing, and treatment must be symptomatic rather than specific.

Complications of the Nervous System, with Treatment.

DR. WILLIAM G STEARNS said it is certain that more organic and functional disturbances of the nervous system are produced by influenza than by any other acute infectious disease. The reason for this is found in Pfeiffer's bacillus and its mode of invasion, together with the unexplained selective action which the bacillus and its toxin have for nerve tissue Because of the general debilitating effect on the entire organism, together with its selective and enfeebling action on the nervous system, the functional nervous and mental disorders are most erous

Of the prodomal period, the symptoms referable to the nervous system are, first and most constant, pain occurring as headache, backache and myalgia In extreme cases the pain is excruciating and is occasionally accompanied by such great mental depression as to become overwhelming The patient lies still, is stupid and unresponsive This condition may pass into one of coma. The excessive pain may produce the opposite reaction, the patient becoming restless, constantly agitated, making many wild demonstrative and often purposeless movements, and is usually more or less delirious, but rarely becomes maniacal These symptoms of profound mental and nervous toxemia greatly improve and finally disappear as the temperature rises

The nervous complications during the course of the disease are either inflammatory or degenerative, or both, that is due either to the direct invasion of the bacillus or its toxin, or both

Encephalitis is of two types, the simple inflammatory or hemorrhagic, and the purulent Simple encephalitis is a rare complication, and due to the direct influence of the bacteria which are more or less disseminated throughout the encephalon, and to the effect of the toxins The purulent form may be either primary or secondary by extension A common complication is the result of an invasion of the cerebrospinal membranes occurring usually at the height of the disease As to pseudomeningitis, symptoms typical of meningitis warrant that diagnosis A few days later these symptoms disappear, and only those of influenza remain Myelitis, always acute, may present the symptom group of Landry's paralysis, a compression transverse myelitis, or spastic spinal paralysis In the last case influenza appears to have selected and injured only the pyramidal tracts

The nervous complications of convalescence are, aside from the occasional development of abscesses, chiefly toxic, and consist of loss of function or disordered function, or both The symptoms are distributed in a haphazard manner, having no characteristic grouping The degenerative changes are chiefly neuritis, and almost every nerve in the body has been affected There is a tendency, however, to select the cranial nerve

Of the functional neuroses, neurasthenia, hysteria and epilepsy are the most prominent Of the psychoses, those of the toxic group are most prominent, and appear in the prodromal stage, disappearing with the rise in temperature or during the febrile stage During convalescence the exhaustional psychoses occasionally develop

As to treatment, inasmuch as the primary effect of the influenza toxin on the nervous system is always irritative, opium and bromids are found to be of the greatest use Calomel and soda, if given with opium, aid the diuretic and hepatic stimulation Where the wet pack is properly used, its effect is most beneficial

Treatment of Acute Mastoiditis Due to Influenza

DR WILLIAM LINCOLN BALLENGER presented the following conclusions 1 The reaction of inflammation consists of an increased hyperemia, increased cell nutrition (increased resistance), and an increased migration of leucocytes 2 The reaction of inflammation is an increased physiologic activity for the purpose of eliminating certain noxious irritants, notably bacteria and their toxins from the tissues 3 In acute inflammations the reaction of inflammation is usually inadequate to accomplish the destruction of the bacteria and their toxins within a short time 4 The reaction being inadequate, it should be promoted, and experience has shown such promotion to be effective. 5 In acute otitis medial incision of the ear drum promotes the reaction of inflammation in the quickest and surest way, and thus often prevents destructive processes of this important organ Incision also provides for adequate drainage, and thus favors the elimination of the bacteria and raises the resistance of the tissues 6 In acute mastoiditis, leeching, in addition to incision of the ear drum if spontaneous perforation has not already occurred, is the best available means of promoting the reaction of inflammation. Heat followed by a dash of cold water is another effective means of promoting the reaction of inflammation

He also presented the following mastoid axioms 1 Tenderness over the mastoid antrum means mastoiditis, that is, apply leeches or heat at once. 2 The way to treat acute inflammation is to increase it, that is, augment Nature's effort to destroy the bacteria and toxins 3 Leeches to-day may rob the grave 4 Leeches to-morrow may feed the grave 5 Do not attempt to kill the germs or you may kill the patient Promote Nature's processes, and they will do the rest.

Complications Resulting from Infection of Nasal Accessory Sinuses

DR H. MANNING FISH emphasized the fact that an accessory sinus disease can give rise to stasis in a more or less remote region He has found in the literature some eighteen fatal cases of influenza due to an empyema, with cerebral involvement In a few of the cases the presence of an accessory sinus disease was diagnosticated before death, in the majority of them it was not suspected during life, but only determined at autopsy In eight cases the cerebral abscess was found to be in the anterior encephalon, on the side corresponding to the accessory sinus disease, showing this location of a brain abscess to be pathognomonic of sinusitis

Most of the acute cases can be relieved by simple intranasal treatment, even the purulent cases with fever, intense pain, etc. In probing the fronto nasal canal or the openings of some of the other cavities, one should use no force, as trauma causes an increased swelling of the parts and hemorrhage, with the formation of clots, which may still further close up the openings and aggravate the symptoms When sinus disease is suspected, the different cavities should be examined, as the finding of an empyema on opening one cavity has led to the neglect of another, which later on caused a fatal termination

The cerebral and ocular symptoms which either accompany or follow influenza should suggest a sinus disease Certain symptoms as vertigo, cephalalgia, optic neuritis and other ocu

lar lesions that are often attributed to limited meningitis or to brain tumor, may be due to a sinus disease A recurrent inflammatory condition in the eye that is aggravated by a cold, or is worse in the winter months, suggests a chronic sinus itis In all cases with cerebral symptoms the accessory sinuses should be examined as well as the ear Sinus disease should not be excluded on account of a negative nasal finding, or by the absence of pain, either spontaneous or on pressure

DISCUSSION

DR THEODORE TIEKEN said that patients with tuberculosis do not bear influenzal infections well The fatalities among tubercular patients are greatly increased by the presence of influenza bacilli Hubermann has never been able to find the bacillus of influenza in the circulating blood, although he has made over 400 examinations In influenza the pharyngeal margins are deeply injected, and the upper portion of the uvula is very anemic He has never seen pharyngeal paralysis as a complication of influenza, but he has noticed irritable bladder in many cases Microscopic examination disclosed a catarrhal cystitis He mentioned a young girl suffering from influenza who urinates every ten or fifteen minutes

DR ADOLPH GEHRMANN called attention to the wide distribution of the bacillus influenza It is relatively easy to find it on mucous surfaces and in pus that has recently formed Apparently this bacillus dies when the pus remains for any length of time, and we have probably the effect of the influenza bacillus through its toxin from disintegration He has found it on every mucous membrane in the body

DR ALMERIN W BAER deprecated the frequent use of coal tar preparations in influenza, because nothing is more debilitating Physicians should recommend the discontinuance of the coal tar preparations because of their injurious effects

MEDICAL SOCIETY OF THE STATE OF NEW YORK

One Hundred and First Annual Meeting, held in Albany, Jan 28 30, 1907

(*Concluded from page 823*)

Technic of Ablation of the Breast.

DR. PARKER SYMS, New York, stated that modern methods of removing cancer of the breast are far in advance of the older ones, and that although much more extensive and radical they are done in a way that causes less shock and risk to the patient Permanent cures are far more frequent than under the old régime and the death rate from operations is very low Doctor Syms prefers the method of Dr Willy Meyer to all others, as it is anatomic, never atypical and if done properly it is bloodless The blood vessels are all cut out at their trunks and not at their small branches A half dozen to a dozen artery clamps suffice It takes from one hour to an hour and a quarter to complete the operation The lymphatics and veins are removed from above downward and not in the direction of their current, and the carcinoma is not cut into There should be no shock and the patient may be out of bed in forty eight hours This operation does not impair motion and the functions of the arm and the blood circulation of the arm are seldom impaired

Surgical Treatment of Goiter

DR MARTIN B TINKER, Ithaca said that the slow development of alarming symptoms of goiter as well as its infrequency in this country has made all concerned ready to temporize with this affection The operation may be done under local anesthesia A visible scar can be avoided by transverse incision Placing the incision between the branches of distribution of the superficial cervical and supraclavicular nerves makes local anesthesia simple To avoid injuring the nerve supply it is well to divide the sternothyroid and thyroid group of muscles high up The personal experience of the author has been highly satisfactory as to results and he has had no deaths Operation should be urged as soon as it becomes evident that palliative measures are not effective

Clinical Observations in Intestinal Obstruction.

DR JOSEPH C BLOODGOOD Baltimore, said that intestinal obstruction was by no means a common disease, there being only 106 cases on record in Dr Halsted's clinic, and in a large clinic in Germany only 70 cases were recorded in 20 years The general practitioner usually sees these cases first and he should be impressed with the necessity of operating within 48 hours The mortality of operations done 48 hours after the onset is about 70 per cent, while the mortality for operations done within 24 hours is 30 per cent It is sometimes difficult to recognize the beginning of intestinal obstruction within so short a time Any patient who has pain enough to require the use of morphin, if the pain is not in the region of the kidney or bladder and not followed in a few hours by watery stools, might be presenting a beginning obstruction He divided these cases into two groups Strangulation in which the lumen is not only obstructed but the circulation interfered with, and obduration in which the lumen is blocked but there is no interference with the circulation In the first the symptoms are more acute and immediate operation is demanded Whenever the patient suffers acutely from abdominal pain initial vomiting and shock he advised against the use of morphin, recommending enemata and washing out of the stomach

Etiology of Mechanical (Surgical) Constipation

DR SAMUEL G GANT New York said that in considering the etiologic factors of constipation the mechanical causes are often overlooked and the trouble attributed to the better known causes In this class of cases no matter how much time is spent in trying to educate the patient and improve his general condition it is impossible to secure the desired result until the obstruction is removed. To accomplish this it is usually necessary to resort to some operative measure The following are the most frequent mechanical causes of constipation Congenital deformities which occur oftener in the rectum and at the anus than elsewhere in the gut extra intestinal pressure from tumors cysts inflammatory disease etc outside the bowel and which cause constipation by compression strictures malignant and non malignant neoplasms foreign bodies either swallowed or formed within the gut fecal impaction The author has treated 45 such cases The masses removed varied in weight from four ounces to 12 pounds

New Operation for the Radical Cure of Femoral Hernia

DR A V MOSCHCOWITZ New York makes an incision in the inguinal region and converts the femoral into a direct inguinal hernia The sac is then ligated or sutured in the usual manner and so high up as to obviate the formation of a peritoneal dimple The internal femoral ring is closed by suturing Poupart's ligament to Cooper's ligament and to the periosteum of the pubic bone The subsequent steps are those of the Bassini operation for inguinal hernia The advantages of this operation are that it can be performed with ease and facility and it is particularly adapted to cases of strangulation Since May 1905 the author has operated on 20 cases all of which have been kept under continuous observation and thus far there has not been a recurrence

Other Papers Read

The following papers were also read 'Etiology of Cancer in the Light of Recent Laboratory Advances' by Dr H R Cayford Buffalo 'Experimental Research in Connection with the Transplantation of Carcinoma in Mice' by Dr C H A Clowes Buffalo (See THE JOURNAL Jan 5 1907 p 15) Chloroma with Special Reference to the Ocular Symptoms" by Drs S C Merrill and A J Bedell Albany The New York State Medical Library' by Dr A Vander Veer Albany State Aid for Medical Libraries" by Dr S Baker Utica Sahli's Desmoid Reaction" by Dr H C Carey Troy Abortive Treatment of Pneumonia" by C L Curtis New York The Visions of Mary Czyska by Dr F L Forcese Buffalo Clinical Lectures and Operative Treatment of Thyroid Affections' by Dr C F Beilby Albany "[illegible] of Examination of Urine for Indican" by [illegible] town "Casuistry of Foreign Bodies" by [illegible] S Talmey New York and "Treatment" by Dr T B Spence Brooklyn

Therapeutics

Scarlet Fever

(Concluded from page 830)

COMPLICATIONS

Scarlatinal Nephritis—The treatment of this complication must be first directed toward its prevention, chiefly by the persistent use of large drafts of water, liquid diet (milk to be preferred), carefully administered hydrotherapy, and protection against cold during the whole course of the disease Heubner of Berlin, in "Modern Clinical Medicine," advises desisting from active treatment so long as the amount of urine does not fall below 500 or 600 c.c Milk diet is to be continued, varying with buttermilk The food requirements of the body are to be completely supplied. Besides milk, lukewarm drinks may be given (lemonade, tea) or some alkaline mineral water, but if at all possible there should be no other food substance so long as a sufficient quantity of milk can be taken In those cases in which milk can not be administered, which are not frequent, the food should consist mainly of vegetables, wheat bread with butter, dried or fresh vegetables, fruit soups, cereals, fruits Many of these substances may be prepared with milk and will be taken by those who reject pure milk Small quantities of milk may be taken frequently instead of large quantities at one time

As soon as the secretion of urine falls below 400 c.c, active measures are necessary Heubner believes that during the acute stage every measure should be taken to prevent irritation of the kidney He avoids even mild drug diuretics and depends on foods and drinks The skin should be kept active by means of sweating The best method consists in placing the patient in a warm bath, 95 F, gradually increasing the temperature to 100 5 F, for from 10 to 15 minutes, and following this by dry or moist packs In cases in which fever is present the sheets may be dipped in cool water so that heat may be withdrawn at the same time and the bath made cooler The patient is allowed to remain one half hour in the pack after profuse perspiration has appeared in the face Then the covers are gradually removed, the skin is dried with warm cloths, and the patient is placed in the bed, which has been previously warmed This process is only to be carried out once or twice daily If sweating is not produced even after a hot drink then small doses of pilocarpin internally appear to be but slightly if at all dangerous The following may be given at the onset of the pack

℞ Pilocarpinæ hydrochloratis gr ¾ | 04
Aquæ dest 3xxv 100 |

M Sig Two teaspoonfuls may be given to a child from 6 to 10 years of age

This author states that blood letting is especially desirable in cases with symptoms of intoxication, headache, vomiting, etc One or two leeches are applied to the renal region The leech itself withdraws about 10 grams of blood, and if with two leeches, therefore, a similar quantity (from 15 to 20 grams) flows from each wound, this is of advantage Soon afterward, in favorable cases, the secretion of urine rises again, and headache and nausea disappear Occasionally venesection may be made and 100, 150, or, in older children, 200 grams of blood may be withdrawn This may be followed by a subcutaneous injection of a normal salt solution, 100 to 150 grams

Cotton recommends the use of the following drugs, especially in patients with weak pulse, combined as follows

℞ Potassii acetatis
Potassii citratis, āā gr xcvi 6
Infusi digitalis q s ad ʒiii 90

M Sig A teaspoonful every four hours to a child from 5 to 10 years old. Follow each dose with half a tumblerful of water

Scarlatinal Rheumatism—Heubner states that the less severe cases may be treated by rest and keeping the affected joints warm In the more severe cases he has had the best results by the use of the salicylates with no deleterious effects on the kidneys Of the preparations of salicylic acid he has found the following to be the mildest and most pleasant

℞ Aspirin (acetyl salicylic acid) ʒi 4 |

Divide in eight powders and direct one powder to be taken at 2, 4 and 6 o'clock in the afternoon

Scarlatinal Typhoid—This complication should be treated in the same manner as a mild attack of enteric fever The drug which Heubner thinks especially efficacious for this complication is quinin.

Hyperacidity of the Stomach.

Bardet, in *Bull. Gen de Therapeutique*, calls attention to the effects of increased hydrochloric acid secretion in the stomach, and to the rational treatment of this condition by alkalies to the point of saturation The following powders are effective for this purpose, they are of two kinds, one to be taken at once after a meal, the other several hours later, as occasion may arise

℞ Sodii bicarbonatis
Magnesii oxidi, āā ʒi 4 |
Calcii carbonatis præcipitati
Saccharı lactis, āā ʒiss 6 |

M Ft chartæ No x Sig Take one powder immediately after each meal, with a little water The dose may be increased or diminished, according to the case

℞ Magnesii oxidi gr xxv 1 | 60
Calcii carbonatis præcipitati
Bismuthi subnitratis, āā gr xii | 80
Sodii bicarbonatis gr xv 1
Sacchari lactis ʒss 2
Codeinæ gr ss | 03

M Ft charta No i Sig Take in a little water at the time of the attack of pain

Fresh Air

W Gilman Thompson, in the *Medical Record*, discusses the fresh air problem in hospitals Air may be fresh and not necessarily cold, and becomes a very important part of the treatment in a large variety of diseases Fresh air is not a specific for any one disease, but increases the resisting power of the individual Thompson gives the following conclusions for the betterment of ventilation in this cold and changeable climate

1 Ward heating and ward ventilation should be capable of independent adjustment at all times

2 The night temperature of the ward should be at least 5° F below the noon temperature, which latter should not be above 68 F or 70 F

3 The ward windows should be furnished with transoms and one or two movable separate panes, to admit of easy regulation and ventilation

4 No window should be so heavy that it can not be handled readily by the nurse

5 The ward should be in communication with balconies or porches, on which the patients' beds can be moved through windows of the casement type Such balconies need not interfere with the adequate lighting and ventilating of the ward, as proved at Bellevue and other hospitals in which they have been used

6 The building of very large wards should be discouraged and a greater number of small adjacent rooms should be provided to admit of the scientific adjustment of the ventilation and temperature to suit the requirements of different patients

7 The windows of the ward, even on the coldest day, should be opened at least twice daily, in the early morning and late afternoon, for a few minutes, to change thoroughly all the air in the room During this time any patient may be covered temporarily with extra bed clothing if there be fear of exposure from draft. The same procedure should be carried out immediately after visiting hours

8 Day rooms should be provided for convalescents where they can obtain change of air and scene, and leave more fresh air for the bedridden patients in the wards

9 The ward should have at least one accessible heater, where patients sitting up temporarily may gather and warm their feet if they desire

10 It is entirely unnecessary to have all the ward windows precisely alike except from some fanciful esthetic standpoint Thus certain windows of the casement type should spring from the floor and open on to balconies Obviously heaters of the ordinary height can not stand in front of these windows

Windows should be grouped with more reference to sunlight exposure, ordinary wind exposure, etc., than is usually done

11 House staff and nurses should not only be taught ventilation theoretically, but made to put it into practice in the wards, and should be made to regard fresh air as of equal importance with fresh food.

Where these simple common sense principles are in daily practice it is possible to use fresh air as a definite therapeutic measure and to secure most gratifying results Finally, Thompson emphasizes the fact that air temperature and ventilation are not synonymous terms

Reaction of Digitalis Infusion.

J Löwy (*Wien klin Wochschr*) after investigating the influence of acids on the activity of digitalis infusion, concludes as follows

1 A digitalis infusion is in all cases weakened by hydrochloric acid of the concentration of the acid in the gastric juice The presence of pepsin is without significance The same action is exerted on a solution of hellebore of a concentration of 0.25 per cent, but a strophanthin solution is uninjured by a high percentage of hydrochloric acid

2. Even allowing a digitalis infusion to stand at room temperature for twenty four hours is sufficient to reduce its active strength to one half

3 This latter effect is due to the action of organic acid present in the infusion and can be prevented in most cases by neutralization

It is desirable, therefore, to reject ready made infusions of digitalis and it would be preferable for the physician to secure a freshly made infusion

Medicolegal

Practice of Medicine by "Doctor" Applying Nerve Food—Not Question for Experts—May Ask as to Ingredients—Charter No Defense

The Supreme Court of Rhode Island says in the case of State vs Heffernan that the words "practice of medicine," as used in Chapter 105 of the general laws of that state of 1896, must be construed to relate to the practice of medicine as ordinarily and popularly understood If the acts shown by the evidence amounted to the practice of medicine, as meant by the statute, the defendant was not protected by his claim of ignorance of any or all of the learning which is necessary for the safe and successful treatment of disease, or by his disclaimer or assumption of any kind or number of titles A person who testifies that he is not a medical doctor, and states that he never attended a medical school or took any course of studies in medicine, but claims to be a doctor of dermatology and physical education by virtue of an Institute of Dermatology and Physical Education, formed by himself and others under the law relating to incorporation, and who also adds the title "nerve specialist," by some authority not disclosed, is still amenable to the law and capable of practicing medicine in violation of the provisions of the statute

1 One witness in the case, who went to the defendant with her nephew, William Buckley, said that the defendant examined him "And I don't know what you would call it, something to test your lungs with, with a strap around him, and he said he was very badly with consumption, and I don't really remember whether he did anything to him that day or not, but he gave him some medicine to bring home, and he told me that it would cost me $100 to get him cured, and he said he would cure him in three months, have him so that he would be able to work in three months time and he charged me $4 for the first four bottles of medicine I got" She said William Buckley went to the office three times, that the defendant stripped him every time, and one time he put some stuff in his ear and gave him some stuff to put in his mouth, and rubbed him around the chest and ears with this medicine that he gave him medicine to take home to drink that he did not go to the house, but said he would if it was necessary, that she went to the office five times, that she got 16 bottles of nerve food in all and paid the defendant $16 That the defendant told her the rule that when he made any special treatment in the office it was $1 extra.

Another witness, Margaret Ryan, testified that she had a skin disease, that the defendant salved her body with this food, that after the treatment he said he could cure her and that he didn't see how He could afford to do it at less than $5 for the massaging and the food, that she went to the office until she had received 25 treatments, for which she paid him $5 a treatment, amounting in all to $125 She then stopped going to his office. She said "The last treatment I took at his office he had to use something in my ears The next day I was in a critical condition I was not able to go to his house so I was obliged to send for him to come to see me at my home He came there and brought some medicine and treated me there, my head and shoulders, and I was not able to go to his office any more. He made three visits there"

A police officer testified that he went to the defendant's office and asked him if he was Dr Heffernan, and he said he was, that he asked him if he had any nerve food and he said he had, that he showed him three different bottles and asked what was the matter with him, that he told him he had catarrh, that he then took him into a side room, had him strip off to the waist, examined him on the lungs and chest, took his chest expansion, showed him three bottles, Nos 1, 2, and 3, and said if he would take No 3 bottle and rub it on his forehead, back of his neck, and nose, it would kill the catarrh, that he asked the price and the defendant said it was $1, and he paid him $1

The defendant testified, among other things that he was a doctor of dermatology and physical education, denied that he had ever practiced medicine or held himself out as a medical doctor, and said that he had never applied to the board of health for a certificate When asked if he had any authority for the practice of dermatology and physical education, he said "I have a certificate from the state in the form of a charter" He then introduced a certificate of the Secretary of State that certain persons, of whom the defendant was one "have filed in the office of the Secretary of State, according to law, their agreement to form a corporation under the name of Heffernan Institute of Dermatology and Physical Education, of the United States of America, for the purpose of promoting, teaching, and practicing the science of dermatology and physical education according to the principles developed and taught by Thomas J Heffernan, the inventor of nerve food, aiding and caring for sick and infirm people, especially those afflicted with consumption and similar loathsome nervous diseases, encouraging temperance, and such other habits as tend to the physical health, long life, and happiness of mankind in accordance with law, and have also filed the certificate of the general treasurer that they have paid into the general treasury of the state the fee required by law" He testified that he had been engaged in life insurance about eleven years, as agent in part, and president, that prior to that he had been in the market and grocery business that he had no medical education, never attended any medical school or took any course of studies in medicine, that he discovered the nerve food about five years ago, that it was composed of herbs and fruit entirely that the nerve food also contained neuzoid, which was made from grasses imported from Japan and other places that he discovered the use of neuzoid in connection with the other ingredients The defendant further testified 'Q You notice in your handwriting, '25 treatments at $5, $125 You yourself have used the word 'treatments' and it is written in there in your own handwriting, why did you use that word' Ans That means the amount of food that was used on her Q You mean that the word 'treatment' was the proper word used when you meant so many ounces of nerve food' Ans Yes Q In connection with your profession you do use the title Doctor' do you not? Ans I do Q What significance does that word Doctor have? Ans Nothing more than teacher Q You used the word in your direct examination as general practitioner 'general practitioner of what' Ans Dermatology and physical education' As to the treatment of Mrs Ryan he testified that he sold her the food" and rubbed it on her head and body and on one occasion put some in her ear that he used at one time some and at a treatment that the food was

As to William Buckley, he testified "I had him remove his clothing on the upper part of his body, including his shirt I took some nerve food and applied it to his body, showed him how he might use it at his house I gave him a lesson in breathing He was unable to take any air into his lungs His chest was entirely neutral I explained to him how to breathe, and I assisted him to take some pus from his nose, got him so that, the second time he called to the office, he was able to expand his chest from nothing to three inches He was a great deal improved in his health at the time he left off treatment"

The court is of the opinion that the acts of the defendant shown in the evidence amounted to the practice of medicine in violation of Chapter 165 of the general laws of 1896, as amended by Chapter 926, of the public laws of 1900 1901

A physician was asked the cross-questions Do you consider the selling of nerve food to constitute the practice of medicine? If a person should buy a bottle of this nerve food and employ some one to rub it on the body, would you consider that to be the practice of medicine? Objections to these questions were sustained, and the court holds the ruling correct It says that the opinion of the witness as to what constituted the practice of medicine was clearly immaterial

The cross-question was also asked the defendant "What is the ingredient of this nerve food outside this one particular ingredient?" The defendant's counsel objected, on the grounds (1) That, while the state had the right to prove the ingredients by its witnesses, if it could, it had not the right to find out from the defendant (2) That the state had not the right to inquire into the composition of the nerve food, because it was the private property of the defendant The trial court said "The first ground is not tenable, in my opinion, because, if the defendant takes the stand, he is compelled to testify in regard to any proper question. It is his privilege not to take the stand if he sees fit to avail himself of it, but, if he does take the stand, he must answer in regard to any pertinent inquiry The second point is that this is private property, and in my opinion that is a consideration which is secondary to the public consideration of the right to know what he has been giving The mere fact that he claimed a secret process does not, in my opinion, relieve him from the duty of answering a proper question, in cross examination as to what he has administered, and I sustain the question of the Attorney General and note your objection thereto" The Supreme Court holds that the ruling of the trial court was correct

The trial court was requested to charge as follows "Defendant is authorized by charter to promote, teach, and practice dermatology and physical education and to aid and care for sick and infirm people, especially those affected with consumption and similar nervous diseases He can not be convicted of practicing medicine illegally if he did nothing beyond what he was given the right to do under said charter A person who uses neither drugs, medicine nor surgery can not be said to engage in the practice of medicine" This request, the Supreme Court says was properly refused The charter gave the defendant personally no authority to do anything and what the corporation was authorized to do was, by the very terms of the certificate, to be done "in accordance with law"

The defendant in order to lawfully practice medicine in Rhode Island the Supreme Court further says, would be obliged to obtain a certificate from the state board of health That portion of the request reading, "A person who uses neither drugs, medicine nor surgery, can not be said to engage in the practice of medicine" was properly refused, as it was not applicable to the evidence in the case and assumed that the nerve food was not medicine It had been shown that the defendant used nerve food of varying strength, that he claimed that the nerve food was used to supply the capillary nerves of the entire body, and that it was very good for all ailments The definition of medicine, in State vs Mylod, 20 R. I 643 would certainly include a remedial substance having the qualities claimed by the defendant for nerve food If the defendant prescribed or administered something which he claimed was good for the alleviation of pain, or the cure of disease, it would not avail him to show by way of defense, that what he so administered did not have the remedial qualities which he had claimed for it The statute was intended to protect the public from pretense and sham, as well as from ignorance

Expert Evidence and Duty to Reduce Damages

The Supreme Court of Washington says that in the personal injury case of Rowe vs Whatcom County Railway & Light Co and others, the principal issue at the trial was whether the plaintiff had curvature of the spine as a result of other injuries received Prior to the trial, the court appointed three physicians to make a physical examination of the plaintiff, at the request of the defendants, who afterward called them as witnesses

Error was assigned to a ruling sustaining objections to the following questions propounded to one of the physicians appointed by the court, in the course of his cross examination "Q You have been paid by the defendant street railway company for making this examination? Q How much does the street railway company pay you for testifying in these cases, Doctor, over and above the regular lawful fees provided by law?" But the Supreme Court holds that no error was committed here It says that while the witness was appointed by the court, he became a witness at the instance of the defendants, and they were obligated to pay, not only his fees as a witness, but reasonable compensation for making the physical examination of the plaintiff The fact that the witness had been paid for his services at the time of the trial was immaterial and irrelevant The second question propounded did not present the question which the plaintiff sought to raise in this court. The question assumed that the witness had testified for the defendant company in other cases, and inquired what he was paid for so doing That question was irrelevant and immaterial in this trial, and whether it would have been competent to inquire what the witness was paid in the case on trial this court would not decide, as no such question was presented in the record before it

The next error assigned was in a ruling sustaining objections to the following questions propounded to a medical witness called by the plaintiff in rebuttal "Q I will ask you to state to the jury whether or not that is a proper test to be applied to this plaintiff in this case, taking into consideration his physical condition and all the other questions that have been suggested concerning his confinement to the house, the fact that he has only been on his feet a portion of the time? Q. I will ask you to tell the jury whether or not the test just made, on laying the plaintiff on his abdomen on the table, in the manner in which it has just been done, was a fair test in this case on the question of curvature that is under consideration before this jury? Q I will ask you to tell the jury in this case whether or not the laying of the plaintiff on the table on his abdomen and face, pushing the left shoulder down, pulling the right shoulder up, for the purpose of changing the position of the spine, if possible, by getting the shoulders as nearly square as it was possible to have them placed in that position, whether that is a fair test on the question of curvature as presented to the jury in this case?" The reason assigned by the trial court for its ruling sustaining objections to these questions was that the question whether the tests applied by the witnesses for the defendant were fair or proper was for the jury In this the trial court, the Supreme Court holds, erred It says that the witness was asked his opinion on a matter involving scientific and technical knowledge, not within the experience of the ordinary witness or jury, and should have been permitted to answer Certainly the ordinary juror is not qualified to determine whether any given test will disclose the presence or absence of curvature of the spine without the aid of expert or opinion evidence Nor was there any merit in the claim that the testimony was not proper in rebuttal While the witness had already testified that the plaintiff had curvature of the spine, stating fully the reasons for his conclusion, yet he was asked nothing concerning the test afterward applied by the defendant's witnesses and the plaintiff could not be and was not required to anticipate the tests that might be resorted to

The jury was instructed "In arriving at the amount of his damages, you are to say, not only what they are, but whether the means used by the plaintiff to reduce the damages were such as an ordinarily prudent man would use You can

not say that he should or should not have obtained any particular kind of treatment As to that, he must alone be the judge But when he has determined what treatment to take, it will be for you to say if in making that determination he used the means that a reasonably prudent man would take to cure himself of his injury, or to reduce the extent thereof under the same circumstances If you find that he did not and you can say that some other treatment would have brought about a cure or reduced the amount of his damages, and that that treatment was one that a reasonably prudent man would have adopted, then you must say that he has not used the care which a reasonably prudent man would use to reduce the damages, and you must take that into consideration in arriving at your verdict, and you fix the standard as to what a reasonably prudent man would do under such circumstances" This instruction, the Supreme Court says, did not, as contended by counsel, hold the plaintiff responsible for the results of his physician's treatment. It simply exacted of him that degree of care which a reasonably prudent man would exercise under the same circumstances, and such this court believes to be the duty imposed by law

Services of Nurse During Childbirth Necessary

The Appellate Term of the Supreme Court of New York says that the case of Schneider vs Rosenbaum was brought by the plaintiff to recover for services as a nurse to the defendant's wife during childbirth The wife engaged the nurse at $10 a week During all this time an action for separation was pending between the defendant and his wife, the wife being the plaintiff It also appeared that the defendant was paying his wife $5 a week, and he contended that he was not liable for the services of a nurse because he and his wife were living apart But the court holds that the services rendered were clearly necessaries for which the husband might be held liable, notwithstanding their living apart

Physical Examination and Privilege Waiving

The First Appellate Division of the Supreme Court of New York says that in the case of Geis vs Geis, the plaintiff sought a decree annulling his marriage with the defendant on the ground of her physical incapacity to enter into the marriage state After the defendant had interposed an answer in which she denied the allegation, the plaintiff moved for an order requiring her to submit to a physical examination On the hearing of that motion the defendant showed that she had already submitted to such an examination by three physicians who attended her and who were competent to testify, and she insisted that she should not again be submitted to the indignity of a further examination, as abundant evidence upon the subject of her condition could be given by those physicians, The motion was denied on condition that the defendant should stipulate to waive the provision of section 834 of the New York Code of Civil Procedure, and consent that such physicians, or any of them, by whom she had been theretofore examined, might testify as to her physical condition Accordingly such a stipulation was signed by the defendant and acknowledged by her

The provision of section 834 of the Code prohibits a physician from disclosing information acquired in attending a patient in a professional capacity and necessary to enable him to act in that capacity But by section 836 of the Code it is provided that a patient may waive this right of secrecy by making such waiver in open court on the trial of the action or proceeding It is also provided that a paper executed by a party prior to the trial regarding such waiver shall be sufficient for such a waiver, but that the attorneys for the respective parties may, prior to the trial, stipulate as to such waiver, and the same shall be sufficient therefor The attorneys did not stipulate in this case Consequently, the court does not deem the waiver sufficient It says that it sees no reason why another physical examination should be required in this case, but the order should be modified so that there could be no question at the trial as to the sufficiency of the waiver Therefore, in addition to the stipulation appearing in the record, the order should require that the attorneys for the defendant should sign the stipulation in accordance with the provisions of section 836 of the Code referred to

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Medical Record, New York.

February 25

1 *Brachial Neuralgia and Arm Pains C. L. Dana New York
2 *Treatment of Acute Diffuse Peritonitis. R. Douglas, Nashville, Tenn
3 *Koch's Emulsion of Bacilli in the Diagnosis of Incipient Thoracic Tuberculosis W Meyer West Hoboken N J
4 *Observations on an Ideal Local Anesthesia for Submucous Resection E. F. Miller New York
5 *Treatment of La Grippe P J McCourt

1 **Brachial Neuralgia**—According to Dana brachial neuralgia is by no means a rare disease Among 197 cases of neuralgia occurring in his practice there were 41 cases of brachial neuralgia This affection is seen more frequently in women particularly women of the leisure classes Dana suggests that this may be due in part to non use of the arms and he advances the theory that the arms of these modern women are becoming quasi vestigial like the appendix the jejunum and the last molar tooth There is often a predisposing neurotic or rheumatic taint and sometimes autotoxemia Exhaustion from occupation or trauma is also a cause Pain in the arm and shoulder usually is the only subjective symptom Dana has not found the treatment of this condition of any avail without rest This is secured by a sling and if necessary, by splints In a good proportion of cases some relief was obtained by use of the salicylates, but they must be given in large doses Neither massage nor hot baths should be given at first

2 **Treatment of Acute Diffuse Peritonitis**—Douglas concludes that peritonitis is not always the same disease, that many factors, chiefly bacteriologic determine its onset course and ultimate termination, and that, therefore there is no one *treatment for peritonitis no method* applicable alike to all cases He disapproves of irrigation because it disseminates infection and removes the phagocytic cells He employs gauze to coffer dam the field of operation, and much of the fluid in the abdominal cavity will be absorbed by this gauze packing Such fluid as comes within easy reach should be taken up with gauze pads but the forcible thrusting of gauze sponges between intestinal coils is condemned Placques of fibrin on the intestines he states should be left undisturbed When quantities of foreign matter are disseminated throughout the peritoneal cavity Douglas employs irrigation, otherwise not When evisceration is necessary he thinks enterostomy and emptying of the intestines through a Paul tube is the proper thing He says that drainage of the general peritoneal cavity is physiologically impossible and that the discharge from the drain is largely due to the irritation of its presence Douglas does not believe in the Ochsner treatment nor in the Fowler position

3 **Tuberculin in Diagnosis of Tuberculosis**—Meyer cites the histories of 28 cases of incipient tuberculosis to show the value of the bacillary emulsion for diagnostic purposes He considers it a most valuable means of determining an early tuberculosis which could not be discovered positively without that means

4 **Local Anesthesia for Submucous Resection.**—Miller uses a mixture made by placing from 20 to 25 grains of cocain crystals in a shallow dish and dropping in sufficient adrenalin chlorid solution, 1 100 to dissolve the crystals The solution is applied with a cotton applicator The anesthesia lasts about three quarters of an hour

5 **Treatment of Influenza.**—Arsenic, in alcoholic solution 1 800, given in 5 minim doses, morning and evening, is said by McCourt, to be a most efficient prophylactic against influenza. From 3 to 5 minims of the tincture of the fresh root of gelsemium, in 6 ounces of water, given in dram doses every one to three hours, is considered by McCourt practically a specific for almost every step, stage and variety of [illegible] free from serious early complications

New York Medical Journal.

February 23

6 *Intestinal Perforation in Typhoid J A. Blake New York
7 *Subinvolution as a Primary Etiologic Factor in Gynecologic Affections. J H Burtenshaw New York.
8 *Trypsin Treatment of Cancer J W Luther Philadelphia
9 Differential Diagnosis of Dilatations and Deep Diverticula of the Esophagus S Kelen Karlsbad.
10 *Gonorrheal Epididymitis A A Uhle and W H Mackinney Philadelphia
11 Common Disabilities of the Foot. J P Fiske, New York
12 *Fallacy of So-Called Rapid Diagnosis of Rabies. N G Keirle Baltimore
13 *Use of Live Steam in Local Treatment of Infection F Griffith New York.

6 **Intestinal Perforation in Typhoid**—Blake says that the physician who makes a correct diagnosis of perforation and calls in the surgeon should receive a greater measure of credit than the latter, even if the operation is successful Results show that at least one fourth of the patients suffering from intestinal perforation can be saved by operation His experience has been that all the patients who are not operated on die, so that the surgical treatment of this perforation is productive of very good results The percentage of recoveries would be even greater if a diagnosis of perforation were made soon after its occurrence

7 **Subinvolution as a Cause of Gynecologic Affections**—Burtenshaw claims that fully 50 per cent. of female affections are directly or indirectly due to subinvolution of the generative organs, and that a very large majority of these may be prevented by proper treatment during the puerperium Burtenshaw does not encourage the use of the obstetric binder after the end of two or three days He never makes use of a pad beneath the binder, nor does he insist on the patient lying flat on her back, but encourages her to assume the most comfortable position possible She is allowed to sit up in bed propped up by pillows, on the third or fourth day, but is not allowed to put foot to the floor until the expiration of at least two weeks Her breasts are emptied at regular intervals, by the child or by the breast pump Lacerations of the pelvic floor or perineum should be repaired within 24 hours He advocates the administration of ergot early and often—in 15 minim doses, thrice daily, after meals, for a period of at least six weeks Hot water vaginal douches, twice daily, body massage, static electricity and strict observance of personal hygiene are also of importance

8 **Trypsin Treatment of Cancer**—Luther recalls that of the cases thus far reported as having been treated with trypsin only five patients have been pronounced cured, and that in not one of them has the microscope corroborated the clinical diagnosis It is evident, however, that the treatment produces a shrinkage of the growth, improvement in the general nutrition, diminution or cessation of pain, and diminution in the discharge, with a decrease of fetor, except in those cases in which sloughing occurs Luther says that if this treatment is perfected it will be by the finding of methods of obtaining purer and more concentrated solutions of the ferments so that they can be administered in reasonable amounts

10 **Gonorrheal Epididymitis.**—A study of 264 cases of epididymitis made by Mackinney shows that this complication occurred in 16 per cent of patients suffering with gonorrhea In treatment the best results are obtained by the application of a saturated solution of magnesium sulphate, in conjunction with elevation of the scrotum After the acute symptoms are relieved an ointment composed of equal parts of the ointments of belladonna and mercury, together with the same quantity of ichthyol ointment, 10 per cent, and lanolin, should be employed to hasten the absorption of the exudate

12 **Rapid Diagnosis of Rabies**—Keirle summarizes his paper as follows

1 The presence of ganglionic changes, described by von Gehuchten and Nelis, or the presence of the structure termed Negri bodies, is not pathognomonic of rabies (hydrophobia), since these are often found when rabies does not exist

2 The absence of one or both of these appearances does not prove that rabies is absent, since they may be present when rabies is absent and absent when rabies is present, therefore they are not infallible indications of rabies (hydrophobia)

3 In the exigency of treatment, the results of preliminary examinations should not be waited for When the circumstances are suspicious, when the animal has been killed or has escaped, when a person has reason to think that he has been in contact with the virus of rabies (hydrophobia), he should, as soon as he can, consult his physician, and, preferably through him, should at once communicate with some reputable institution treating this disease preventively, and abide by the advice given.

13 **Live Steam in Treatment of Infection.**—It seems practical to Griffith to employ live steam projected into the abdominal cavity through a median incision as a means of combating general septic peritonitis, the indication of shock as well as sepsis being met by this means. In the treatment of local infections Griffith's plan of action is to apply a light, fluffed gauze dressing held in place by use of as few as possible turns of a roller bandage If drainage openings are to be preserved a loose twist of rubber tissue is employed Elevation of the part affected by slinging or otherwise is always insisted on as being of as much importance as anything which can be done for the patient Frequent applications of heat by immersion of the bandaged part into the hot water as often as ten or twenty times a day in serious cases, and allowing it to remain submerged for from half a minute to five minutes at a time The patient always reports that he is able gradually to increase the temperature and the time of the immersions Rapid evaporation takes place after each dip, so that if examined five or ten minutes after one of the treatments the parts will be found quite dry

Boston Medical and Surgical Journal.

February 21

14 Relationship of the Physician to the Public Need C J Blake Boston
15 *Decrease of Infectious Diseases J H McCollom Boston
16 Medical Inspection in Schools. R. W Lovett, Boston
17 *Case Simulating Cirrhosis of Liver Due to Carcinoma of Kidney and Vena Cava. C. F Witherington Boston
18 *Pyelitis Complicating Pregnancy J B Swift, Boston
19 *Pyelitis in Pregnancy and the Puerperium F S Newell, Boston
20 *Case of Pyelitis During Pregnancy C H Hare, Boston

15 **Decrease in Infectious Diseases**—McCullom attempts to show what has been done in the past few years toward the diminution in the frequency of the three principal infectious diseases, namely, diphtheria, smallpox and scarlet fever The author emphasizes the great importance of isolation, careful medical inspection of the children in the schools, and the establishment of isolation hospitals He says that in order to accomplish much in the suppression of infectious diseases there should be cordial co operation of physicians, health officers and the public, and that the health officer should be specially trained for his duties Special instruction should be given in medical colleges for health officers

17 **Carcinoma of Kidney and Vena Cava.**—Witherington reports the case of a man, 56 years of age, who complained of considerable digestive disturbance, nausea, vomiting, constipation, dyspnea, ascites and edema of the legs In view of the absence clinically of evidence of sufficient disease, either of heart or kidneys, to account for the great edema, and because of the presence of portal obstruction, a large liver, dilated veins and strongly alcoholic history, a diagnosis of cirrhosis of the liver was made At the postmortem there was found a carcinomatous growth of the right kidney with carcinomatous occlusion of the inferior vena cava, the right renal vein and the proximal portion of the left renal vein The original site of the carcinoma seemed to be the right kidney

18 **Pyelitis Complicating Pregnancy**—Swift has seen three cases of pyelitis complicating pregnancy, one of which he reports in full He has found 40 cases reported in the literature In his collection of 41 cases, there were 15 primiparæ 14 multiparæ, not mentioned 11 The right side was affected 37 times and the left 4 Twenty eight patients went to full term Spontaneous premature labor occurred four times, premature labor was induced once and in nine cases, the pus having disappeared from the urine, the patients passed from observation Nephrotomy was done once antepartum, four times postpartum The colon bacillus is reported 17 times, no bacterial examination being recorded in the rest.

19 Id.—Newell cites the histories of five cases, in all of which the right kidney was involved primarily and both kidneys in two cases

20 Id.—Hare reports one case of pyelitis occurring during pregnancy. The patient was carried through the pregnancy successfully, and had a normal and easy labor and a normal convalescence

St. Louis Medical Review

February 16

21 Premeditation in Inebriety. T. D. Crothers, Hartford, Conn.
22 *Ethyl Chloride-Ether Sequence. W. E. Leighton, St. Louis.
23 *Chloroform Anesthesia. M. B. Clopton, St. Louis.
24 *Complications Following Anesthetics. E. L. Apperson, St. Louis.

22 Ethyl Chlorid-Ether Anesthesia.—This combination of anesthetics is considered an ideal one by Leighton for effecting general anesthesia.

23 Chloroform Anesthesia.—Clopton says that while chloroform is definitely indicated in some cases, he prefers ether because the patient runs less risk, and there is little more, if any, discomfort when ether is given by the open drop method.

24 Complications Following Anesthesia.—Apperson reviews what is known of the complications following the use of anesthetics, and discusses the methods usually employed to prevent their occurrence.

The Journal of Medical Research, Boston.

December

25 Methods for Testing the Indol Reaction. E. N. Tobey, Boston.
26 The Cholera Red Reaction and the Indol Reaction. Id.
27 The Uricolytic Enzyme in Animal Organs. A. E. Austin, Boston, Mass.
28 *Non-virulent Diphtheria Bacilli from an Infected Middle Ear. E. N. Tobey, Boston, Mass.
29 Influence of Subcutaneous Injection of Liver Extract on the Hepatic Catabolism of Uric Acid. L. B. Stookey, Los Angeles.
30 *Modification of Bacillus Dysenteriæ After Cultivation in Agglutinating Serum. H. T. Marshall and J. H. M. Knox, Jr., Baltimore.
31 *Chemistry of Atheroma and Calcification (Aorta). L. K. Baldauf, Albany.
32 *Distribution of Treponema Pallidum (Schaudinn) (Spirochæta Pallida) in the Tissues in Congenital Syphilis. O. T. Schultz, Cleveland, Ohio.
33 *Effect of Amyl Nitrite Inhalations on the Blood Pressure in Man. A. W. Hewlett, San Francisco.
34 *Parathyroid Glandules in Paralysis Agitans. R. L. Thompson, St. Louis.
35 *Resistance of the Red Blood Corpuscles of the Horse to Salt Solutions of Different Tonicities Before and After Repeated Withdrawals of Blood. T. Smith and H. R. Brown, Boston.
36 Hemorrhagic Hepatitis in Antitoxin Horses. P. A. Lewis, Boston.
37 *Diphtheria Toxin Paralysis in the Guinea-pig. P. A. Lewis, Boston.
38 *Lesions Caused by Trichina Spiralis in Man. C. Frothingham, Jr., Ann Arbor, Mich.
39 Hemoflagellates of an African Fish (Clarias Angolensis). J. E. Dutton, J. L. Todd and F. N. Tobey, Boston.
40 Notes on *B. coli* in Drinking Water. D. Rivas, Philadelphia.

28 Testing Indol Reaction.—Tobey describes bacilli isolated from an infected ear, with the morphologic characteristics of diphtheria bacilli but non-virulent to guinea-pigs and without any effect on mannite.

30 Modification of Dysentery Bacilli.—Marshall and Knox show that dysentery bacilli cultivated in specific and normal serum become inagglutinable and lose the power to unite with agglutinin. The exact mechanism of this apparent acquired immunity to agglutination is discussed without reaching any final conclusions.

31 Chemistry of Atheroma and Calcification.—Baldauf's results corroborate those of Wells, namely, that in pathologic calcification the inorganic salts are deposited in approximately the same proportion as in normal ossification. The formation of calcium soaps which Klotz claims plays an important part in calcification, was not demonstrated. Baldauf suggests that the large amount of lecithin in early calcification and the fall in lecithin as the calcium content rises may be explained on the score that the phosphate radical is derived from decomposition of lecithin.

32. Treponema Pallidum in Congenital Syphilis.—Schultz corroborates recent observations on the distribution of *Treponema pallidum* in the tissues in congenital syphilis. He declares that the microbe is to a marked degree an intracellular parasite, glandular epithelium being especially invaded. The connective tissue formation is regarded as due partly to destruction of parenchymatous cells, partly to stimulation of connective tissue cells. The microbes multiply chiefly in the perivascular lymphatics and in the tissues but not in the larger blood vessels. In this way is explained syphilitic periarteritis.

33 Effect of Amyl Nitrite on Blood Pressure.—Hewlett shows that the typical action of amyl nitrite is not that usually given to it, namely, dilatation of the peripheral arteries and fall of pressure, but rather an increased total output of blood from the heart so that there is a more rapid flow through the dilated vessels.

34 Parathyroids in Paralysis Agitans.—There was no alteration demonstrable by morphologic methods in the parathyroids in nine cases of paralysis agitans studied by Thompson and hence there is no anatomic basis for the hypothesis that paralysis agitans is a chronic progressive hypoparathyroidismus.

35 Resistance of Red Corpuscles to Salt Solution.—Two facts are prominent in the observations of Smith and Brown, namely, individual variation in resistance and a marked stability in this variation. Hence statements in regard to lowered resistance and the like of human corpuscles do not mean anything definite until individual and racial variations in health have been worked out. In the horse normal variation may be quite as great as any assignable to disease. Consequently statistical observations among human beings in temperate as well as tropical climates are very desirable.

37 Diphtheria Toxin Paralysis.—Lewis found that amyloid change in the liver and less frequently in the spleen is caused in a majority of the horses, by the routine treatment with diphtheria toxin and repeated bleeding extending over three years. These horses are very subject to hemorrhage into the liver and rupture with hemorrhage into peritoneal cavity. Of direct practical bearing is the observation that if horses are not bled more than five liters per 1 000 pounds each three and one half to four weeks they may be kept for a long time as antitoxin producers.

38 Trichina Spiralis Lesions in Man.—Frothingham found trichina embryos in the sinuses of the mesenteric lymph nodes and in the liver capillaries, thus showing that they enter by the lymph stream and are distributed by the blood. He also found embryos in hemorrhagic areas in the lungs and local destruction of tissue in the liver, pancreas, brain and heart due to embryos breaking through the vessels.

Maryland Medical Journal, Baltimore

February

41 *House Disinfection and Reinfection. W. R. Stokes and W. P. Stubbs, Baltimore.

41 House Disinfection and Reinfection.—Stokes and Stubbs show the results obtained by use of formaldehyd gas in room disinfection after communicable diseases and demonstrate the effect of this gas on test cultures. The reinfection of houses following disinfection is also considered. Although disinfection alone is not depended on to prevent the spread of communicable diseases, the authors believe that in combination with other means it is useful in limiting their spread. They collected statistics from 5 546 cases of diphtheria and scarlet fever. In 2 807 cases of diphtheria in Baltimore followed by formaldehyd disinfection after the throats of all members of the household were declared free from diphtheria bacilli there occurred during the same year 65 reinfections or 2 35 per cent. In 2 739 cases of scarlet fever, followed by formaldehyd disinfections (not less than 21 days after official report of the case to the Baltimore city health department) there were 69 reinfections or 2 55 per cent. In 1 709 of the above diphtheria disinfections there were 40 reinfections where they obtained the result of the control cultures. Three of the cultures were positive, showing the disinfection for some reason (construction of room etc.), was technically defective. Thirty one were negative, showing a thorough disinfection and six were [illegible] missing, sent back empty or were broken in transit. In 1 [illegible] of the scarlet fever disinfections there were 47 reinfections [illegible] which they obtained the result of the control cultures [illegible] were positive, 32 were negative and 8 [illegible]
In 1,550 of the diphtheria cases from

been able to gather this information there occurred 47 reinfections (2.54 per cent.)

Journal of the Minnesota State Medical Association and the Northwestern Lancet, Minneapolis

February 1

42 *Significance of Delirium in Typhoid. H. A. Tomlinson St. Peter, Minn.
43 Glenard's Disease. G. D. Head, Minneapolis.
44 Fourth of July Casualties and What Can Be Done in Minneapolis Toward Their Suppression. F. C. Todd, Minneapolis.
45 *Accidental Perforation of the Uterus During Surgical Manipulation. H. B. Sweetser, Minneapolis.

42 Delirium in Typhoid.—According to Tomlinson delirium in typhoid is primarily the evidence of instability in the higher functions of the brain, and the character of the delirium will be dependent on the degree of this instability. Its persistence is not necessarily the result of the formation of toxins but rather is due to the fact that these irritant substances are not eliminated. This accumulation of toxins is principally due to insufficient renal function. Therefore, Tomlinson says, the delirium is not only significant of the involvement of the nervous system, but is also by its activity and persistence, an indication of the gravity of the prognosis.

45 Accidental Perforation of Uterus.—Sweetser reports two cases. One patient was curetted under chloroform anesthesia after a supposed miscarriage. A dilator was inserted and opened, an Emmett curette forceps was then passed into the uterus, its jaws separated, closed and withdrawn. In the bite of the forceps was found a bulky membranous mass which was at once recognized as bowel. The tear in the uterus was situated in the posterior wall of the cervix. Sweetser emphasizes the following points:

1. The uterus has not always a firm, thick wall, capable of withstanding rough treatment.
2. Perforation of its wall is by no means infrequent.
3. Its position and size should be determined in every case before manipulations are undertaken within its cavity.
4. Rigid asepsis should be maintained in all cases.
5. Any force in the introduction of instruments used in manipulation is absolutely inadmissible.
6. If perforations occur, any intrauterine manipulations should at once be suspended.
7. The subsequent treatment will depend on the amount of damage done.
8. Irrigation is dangerous.

California State Journal of Medicine

January

46 *A Combination of Syphilis and Epithelioma of the Tongue. D. H. Montgomery and H. M. Sherman, San Francisco.
47 *Diagnosis of Some Lung Conditions Requiring Surgical Intervention. G. H. Evans, San Francisco.
48 The Social Evil and Its Cost and Control. G. H. Aiken, Fresno.

46 Syphilis and Epithelioma of Tongue.—The interesting points in Montgomery's case are the combination of two important diseases such as syphilis and epithelioma in the same lesion, and the elicitation of an interesting history of unsuspected syphilis. The syphilis evidently had been contracted during the patient's first pregnancy, although it could not be ascertained how the infection occurred. Both the patient and her husband denied all knowledge in the case. All the children of the patient showed numerous evidences of hereditary syphilis.

47 Lung Surgery.—In connection with the discussion of the surgical treatment of abscess of the lung, Evans reports a case of abscess following pneumonia occurring in a man, 45 years of age. An operation was done and the patient made an uneventful recovery.

West Virginia Medical Journal, Wheeling

February

49 Dishonesty in Foods and Drugs. R. J. Reed, Wheeling.
50 Pneumonia. F. B. Murphy.
51 Gallstones, Etiology, Diagnosis and Treatment. S. M. Mason, Clarksburg.
52 Prejudice. C. H. Maxwell, Morgantown.
53 Stricture of Male Urethra—Suggestions as to Surgical Treatment. H. B. Stout, Parkersburg.
54 Rupture of the Intestine. W. W. Colden, Elkins.
55 *Ethics of the Medical Specialist. T. W. Moore, Huntington.
56 Typhoid Fever at Davis Memorial Hospital. T. J. McBee, Elkins.

55 Ethics of Medical Specialists.—Moore believes that with the excellent training that is now given in medical colleges the general practitioner will be more successful in differentiating serious from trivial cases, and that with the confidence born of knowledge he will act when emergencies arise with the result that only diseases requiring special appliances or extraordinary skill for their treatment will be referred to a specialist. This will deter men from taking up specialties who have not had the preliminary training as well as the superior opportunities necessary to enter these chosen fields.

Chicago Medical Recorder

February 15

57 *Method of Graduated Removal of Inferior Nasal Turbinal. H. Gradle, Chicago.
58 *Hemorrhoids. Their Treatment Under General and Local Anesthesia. J. R. Pennington, Chicago.
59 The Doctor in Practical Sociology. W. D. Byrne, Chicago.
60 Drug Habits. W. F. Waugh, Chicago.
61 Gymnastics in Treatment of Spinal Curvature. C. Westman, Chicago.
62 Various Modes of Locomotion for the Physician. J. M. Dal, Chicago.

57 Removal of Inferior Nasal Turbinal.—Gradle describes a motor driven trephine working within a guard for sharp spines on the nasal septum, and for resection of the inferior turbinal. The essential part of the apparatus is the guard, a brass tube 8.5 cm. long with an internal diameter of 7 mm. Twenty-five mm. beyond the front end of the tube one half of its circumference is cut off, leaving thus a semi-cylindrical shell. The use of this apparatus is described in detail.

58 Hemorrhoids.—Pennington presents a general review of the treatment of hemorrhoids, discussing particularly the technic of the anesthesia to be employed for operative intervention. He states that local anesthesia conduces to a much more rapid recovery than does general anesthesia, although it can not be employed in every instance.

Ohio State Medical Journal, Columbus

February 15

63 *Difficult Diagnosis of Bright's Disease. J. Eichberg, Cincinnati.
64 Medical Inspection of Public Schools as a Factor in Prevention of Disease. S. O. Barkhurst, Steubenville.
65 The School Girl from a Hygienic Standpoint. J. Fraunfelter, Canton.
66 *Where We Skid. P. L. Myers, Toledo.
67 Stricture of the Urethra. T. G. Youmans, Columbus.
68 Diagnostic Value of Pain. H. R. Geyer, Zanesville.
69 Examination of the Eyes of 1048 East Cleveland School Children. L. K. Baker, Cleveland.

63 Diagnosis of Bright's Disease.—Eichberg reviews the difficulties ordinarily encountered in attempting to diagnose disease of the kidneys and urges the importance of thorough systematic and careful clinical study in every case.

66 Where We Skid.—Myers' paper is a rather facetious dissertation on the general subject of cleanliness and the short comings of the profession in materia medica and etiology.

Journal of the Kansas Medical Society, Lawrence

February

70 *Acute Exfoliative Dermatitis. H. H. Bogle, Pittsburg, Kan.
71 Skin Grafting. H. H. Heylmun, Hutchinson, Kan.
72 Superstition in Medicine. T. C. Hinkle, Emporia.
73 *Maxwell Method of Treating Intracapsular Fractures of the Femur. O. D. Walker, Salina.
74 The Roentgen Ray and Its Uses. M. H. Bacon, Kansas City.
75 Cholecystitis. J. T. Axtell, Newton.
76 Hypopyon Keratitis. A. C. Graves, Pittsburg.
77 *Gangrene of the Skin. E. Smith, Lawrence.
78 *New Method for Treating Retroflexion. F. A. Harper, Pittsburg.

70 Acute Exfoliative Dermatitis.—Bogle reports a case of this kind occurring in an infant nearly two months old. Treatment proved unavailing. The baby died at the age of four months.

73 Intracapsular Fracture of Femur.—Walker says that for efficiency in the treatment of intracapsular fractures the Max Wall method stands alone as the most rational and most successful yet offered to the profession. The treatment was first described by Dr. Maxwell about 35 years ago.

77 Gangrene of Skin.—Smith reports the case of a little girl, aged 19 months, who was suddenly taken ill with vomiting, diarrhea, tenesmus, fever and convulsions. On the following day a small blister was found on the right natis. This spread rapidly until it covered the right buttock, extending to the left. There appeared four blisters on the back and one

on the thumb of the right hand. These blisters increased in size considerably, became dark red in color, livid in the center The patient died on the third day

78 **Retroflexion of Uterus**—To reduce a posterior displacement of the uterus Harper puts the patient in the knee chest position and introduces in the anterior fornix a tightly rolled piece of absorbent cotton of requisite size, tied at each end with a cord, which he calls a cotton pessary To reduce an anterior displacement the patient assumes the dorsal position and the cotton pessary is placed in the posterior fornix and used as a fulcrum to straighten out the flexion One hand in the rectum and the other over the abdomen or in the vagina and a special uterine repositor assist in restoring the position of the organ

Journal of the Michigan State Medical Society, Detroit.

February

79 *Puerperal Insanity H Ostrander Kalamazoo
80 *Cesarean Section History of Successful Case C H Rodi Calumet.
81 *Therapeutic Value of Rectal Tampons. J A MacMillan Detroit
82 *Gastrointestinal Conditions in Pernicious Anemia. H A. Freund, Ann Arbor
83 *Significance of the Term Itch in Some of the More Common Pruriginous Affections of the Skin A P Biddle Detroit.
84 Traumatic Lesions of the Eye with Special Reference to their Effect on the Cornea H R Conklin, Tecumseh

79 **Puerperal Insanity**—At the Michigan Asylum for the Insane the number of cases of puerperal insanity admitted during a period of ten years ending November, 1906, was 63, or 3 9 per cent of all the admissions Ostrander analyzes 30 cases, of which 9 were gestational and 21 postpartum All the patients were married, four were under 20 years of age, 16 between 20 and 30, 9 between 20 and 30, and one was 40 years of age Of the puerperal cases the symptoms began immediately after confinement in 6, in one week in 4, in two weeks in 4, in three weeks in 1, in four weeks in 1, in five weeks in 1, and in six weeks in 4 The onset was sudden in 10 cases, gradual in 17 cases, and unknown in 3 cases Fourteen patients had insane and neurotic relatives, only 9 had negative family and personal histories Four were cases of delirium due to septicemia, 4 were cases of confusion and depression due to toxemia, 10 were manic depressive cases of the depressed type, 8 were manic depressive cases of the manic type, and 4 were cases of dementia præcox Recovery occurred in 16 cases (4 of these patients have had subsequent attacks not associated with puerperium), 2 were improved, 10 remained unimproved, and 2 patients died The recoveries occurred at varying periods, from five weeks to fifteen months

80 **Cesarean Section.**—Rodi reports a case of Cesarean section done during the eighth month of pregnancy on a woman whose conjugate diameter was 1¾ inches Both mother and child lived

81 **Value of Rectal Tampons.**—MacMillan considers the rectal tampon a very useful agent to stimulate intestinal peristalsis and to improve the muscular tone of the bowel He has used rectal tampons in a large number of cases of chronic constipation with most gratifying result The tampon is placed above the rectal valves and is allowed to remain in this position for three or four hours The tampons are composed of cotton, lamb's wool or gauze They are inserted through a proctoscope

82 **Gastrointestinal Conditions in Pernicious Anemia.**—The causes of pernicious anemia as they are understood to day are touched on briefly by Freund He says that of 53 patients, 54 per cent. complained of loss of appetite, 38 per cent of bad taste in the mouth, due largely to poor teeth, 46 per cent of nausea and vomiting, 54 per cent of epigastric distress, 24 per cent of diarrhea, and 10 per cent of constipation Freund insists that a careful gastric analysis and an examination of the intestinal contents be made in all these cases as a means of instituting appropriate treatment

83 **Itch.**—Biddle divides this affection into the following groups 1 Verminous parasitic diseases 2 Vegetable parasitic diseases 3 Bacterial parasitic diseases 4 Secondary bacterial infections 5 Pruriginous papular dermatoses 6 Pruriginous sensory neuroses

Cleveland Medical Journal.

February

85 Histology of the Thyroid in Simple and Toxic Exophthalmic Goiter D Marine, Cleveland.
86 Some Causes of Hematuria. W E Lower
87 Effects of Hot Humid Atmospheres on the Animal Body J J R. Macleod and J D Knox.
88 Experimental Glycosuria J J R. Macleod and C E Briggs

Journal of the Missouri State Medical Association, St Louis

February

89 Treatment of Gastric Ulcer E E Murphy Kansas City Mo
90 Abdominal Injuries. H C Dalton St Louis
91 Collection of Human Embryos in the Anatomic Laboratory of the University of Missouri C. M. Jackson Columbia
92 Non lithogenous Obstruction of Biliary Ducts A H Cordier Kansas City Mo
93 The Physician and the Association as Seen by the Country Doctor J B Norman California Mo

The Canada Lancet, Toronto

February

94 Psychoses and Neuroses of Urethral Origin N E Aronstam Detroit Mich.
95 Medical Thoughts Facts Fads and Fancies J S Sprague Stirling Ont
96 Case of Acute Phlegmonous Gastritis J J Mackenzie Toronto
97 Intestinal Obstruction A A Macdonald Toronto
98 Carbonate of Creasote in the Treatment of Pneumonia and Bronchopneumonias of Childhood A Fletcher Toronto

Wisconsin Medical Journal, Milwaukee

January

99 Pathologic Basis for a Rational Curative Treatment of Malignant Disease of the Breast J L Yates Milwaukee
100 *Diagnosis and Treatment of Injuries to the Eye C E Seaman Milwaukee
101 *Tuberculosis Sanatoria and Treatment C A Harper Madison
102 Symptoms and Diagnosis of Aortic Aneurism L I Jermain Milwaukee

100 and 102—See abstracts in THE JOURNAL, July 14, 1906 page 144

Journal of the Arkansas Medical Society

January 15

103 Use of Formaldehyd Solution in Cure of Epithelioma I Kirby Harrison
104 Interesting Cases in Minor Operations I K. Williams Philadelphia.

Western Medical Review, Lincoln

January

105 Practical Points on Radiotherapy A Schalek Omaha Neb
106 The Truth About the Sharp Curette W O Henry Omaha
107 Secondary Inflammation Following Appendicitis C E Allison Omaha.
108 Nervous Eructations and Pneumatosis A O Peterson Omaha
109 Importance of Early Diagnosis in Cancer of the Rectum and Sigmoid R D Mason Omaha

Central States Monitor, Indianapolis

February

110 Various Gross Pathologic Conditions of the Urethra Revealed by the Urethroscope N L. Aronstam Detroit
111 Eyestrain S C Norris Anderson, Ind
112 Case of Abscess of the Prostate G Link Indianapolis
113 Open Air Treatment of Pneumonia W T S Dodds Indianapolis
114 Foreign Bodies in the Bronchi W Schell Terre Haute Ind

Iowa Medical Journal, Des Moines

February 15

115 Chairman's Address Section of Mental and Nervous Diseases Iowa State Medical Society J M Barstow, Council Bluffs
116 Dementia Paralytica. R Moon Clarinda
117 *Manual Training for Medical Students and Instruction in the Principles of Psychotherapy G H Hill Des Moines
118 Cough Its Varieties and Their Treatment C I Buttz Chicago
119 A Few Points on Gallstones. L. W Little Iowa City
120 Medical Education and Some Needed Legislation I H Hubbrook Cherokee

117—See abstract in THE JOURNAL, July 28, 1906 page 306

FOREIGN

Titles marked with an asterisk (*) are abstracted below Clinical lectures single case reports and trials of new drugs and artificial foods are omitted unless of exceptional interest

British Medical Journal

February 9

1 *Toronto Hospital for Advanced and Incipient Cases of Tuberculosis W H Broadbent.
2 *Retrospect of a Thousand Consecutive Cases of Abdominal Surgery J Swain
3 *Claim of the Surgeon to Conduct the After treatment of Operation Cases C A Morton
4 *Dissemination of Intra Abdominal Malignant Disease by Means of the Lymphatics and Thoracic Duct W M Bevan
5 *Temperature in Malignant Disease of the Liver and Bile Passages J W Burrell
6 *A Pair of Forceps in the Abdomen for Seven Years J F I Stewart

1 Tuberculosis—Broadbent describes the Toronto Hospital for Advanced Cases of Tuberculosis, which was built at the instigation of the Association for the Prevention of Consumption.

2 Abdominal Surgery—The 1,000 cases reported by Swain include 101 operations on the ovaries and tubes, 75 on the uterus and broad ligaments, 127 for hernia, 229 for appendicitis, 49 for diseases of the liver, gall bladder and bile ducts, 65 on the kidney, 126 for diseases of the stomach and intestines (excluding hernia and appendicitis), 29 on the urinary bladder and prostate, and 24 for tuberculous peritonitis and peritoneal adhesions. Some of the comments made by Swain are particularly interesting. For instance, he invariably puts a double ligature on all structures in the abdomen and pelvis that have been ligatured before being cut away, the second ligature being applied after the division of the tissues. He does not advise the removal of all myofibromatous tumors of the uterus, as he thinks more lives will be saved by a judicious selection of cases for operation. In young women Swain chooses myomectomy, provided that the general condition of the patient is fairly satisfactory, that the tumor does not extend much above the umbilicus, and that there are no important complications such as severe inflammatory disease of the tubes and ovaries or advanced anemia. In cases in which myomectomy is undesirable, he prefers the operation of retroperitoneal hystero-myomectomy. When the myofibroma is associated with malignant disease he removes the uterus and tumor. For cases of cancer of the uterus that are diagnosed early he believes that colpo-hysterectomy is the best operation, although in some cases abdominal hysterectomy must be resorted to.

Swain is not convinced of the desirability of performing cholecystectomy as a routine measure in the operative treatment of cholelithiasis. He thinks that recurrence of the gallstones after operation is rare. He has not seen a case. He has not performed cholecystectomy except for carcinoma of the gall bladder, permanent blocking of the cystic duct, and in an atrophic gall bladder which could not easily be dealt with in any other way.

Speaking of nephropexy, he says that when belts fail operative measures are indicated in healthy adults in whom a freely mobile kidney is associated with symptoms of gastric crises or of torsion of the renal vessels. He claims that of those cases of movable kidney that do give rise to symptoms distinctly referable to the renal mobility, probably at least two-thirds are better treated by some form of belt than by operative fixation. For the radical cure of hernia Swain prefers a modification of Kocher's method for the ordinary run of cases, Bassini's method being reserved for large hernias of old standing with a widely dilated external ring. In the performance of intestinal resection Swain prefers the use of a simple suture to that of mechanical appliances, Halsted's quilt suture is his choice. In stomach surgery he always performs the posterior operation of gastrojejunostomy. When the duodenum can be freed, Kocher's lateral gastroduodenostomy is the routine measure. Frank's method of gastrostomy is the one usually adopted by Swain when that operation is indicated.

3 After Treatment of Operation Cases—Morton claims that the operating surgeon should be allowed to conduct his own after treatment whenever possible. He also discusses an important detail of the after treatment of abdominal operations—the position of the patient and one complication which may be very serious—flatulent distension. He says that in all cases in which drainage of any quantity of fluid from the abdomen is desired the patient should be kept in the half sitting position, the position that is sometimes spoken of as Fowler's position. He thinks it very important that the patient should not turn himself or raise his shoulders until the time he is allowed out of bed, because the latter movement, at any rate, is just the one to interfere with healing or to stretch a weak scar.

4 Dissemination of Intra-abdominal Malignant Disease—The objects of Stevens' paper may be summarized as follows:

1 To point out that the lymphatic glands above and under cover of the left clavicle are much more frequently involved in intra-abdominal malignant disease than is generally recognized, and that this may be demonstrated in some cases (when the glands are not palpable) by percussion over the clavicle or in the infraclavicular region. In other words, the glandular enlargement which can be clinically demonstrated is not necessarily only "supraclavicular."

2 To show that the thoracic duct—and to a very much lesser degree the right lymphatic duct—plays a most important part in the dissemination of intra-abdominal malignant disease, either by acting as a carrier of infective material or by being itself directly involved.

3 To attempt to demonstrate that the secondary infection of different parts in cases of malignant abdominal disease can be explained on anatomic grounds.

5 Temperature in Malignant Disease of Liver—Russell claims that nearly two-thirds of the 52 cases of malignant disease of the liver and bile ducts studied by him showed some degree of pyrexia, at any rate, in the later stages. Fourteen cases of uncomplicated malignant disease of the liver showed no abnormality of temperature beyond a tendency to drop below the normal level. Twenty-five similar cases showed some degree of pyrexia. Of 13 cases in which the growth arose from some part of the bile passages, only three presented a normal temperature chart. The termination of the case does not appear to bear any relation to the temperature.

6 Forceps in Abdominal Cavity—In the case reported by Stewart the forceps were lying in the pelvis, the handles being directed forward and upward. Though the patient's health had been wretched during the 10½ years, and a large part of this time was spent in bed, she occasionally felt well enough to participate in dances. Her chief symptoms during these years were sudden acute pain, constipation alternating with diarrhea, and pains in the lower limbs. At the operation the forceps were found inside the lumen of the bowel.

The Lancet, London.
February 9

7 Diagnosis and Localization of Cerebral Tumors. C. E. Beevor.
8 *Portal Cirrhosis of the Liver. D. Duckworth.
9 *Affections of the Lachrymal Apparatus. S. Stephenson.
10 *Sarcoma of the Scapula in a Child Aged Four Years. L. B. Rawling.
11 *Fibroids of the Uterine Cervix. J. R. Morison.
12 *Appendicitis in Typhoid Fever. C. Leedham-Green.
13 *Sanitary Condition in Relation to Infantile Mortality. T. Divine.
14 Rôle of the Blood Plasma in Disease. H. Campbell.

8 Portal Cirrhosis of Liver—Duckworth reviews briefly the clinical history of this affection. He states that surgical intervention is indicated only in the early stage of ascites, and only then if the general state of the patient is satisfactory, and when treatment by potassium iodid and one or two tappings have failed to benefit the condition.

9 Affections of Lachrymal Apparatus.—In this very complete discussion Stephenson considers the anatomy, physiology and diseases, including their treatment, of the lachrymal gland and its duct.

10 Sarcoma of Scapula—The case reported by Rawling was one of primary sarcoma of the body of the scapula. The general condition of the child was not very favorable and the tumor was so extensive and was growing so rapidly that operative intervention was out of the question. Rawling reviews 23 recorded cases of sarcoma of bone occurring in children under 9 years of age, adding to these 36 other cases grouped by other writers. Rawling found that 40 of the patients died at an early age (some of these cases were inoperable), while 19 recovered from the operation. One patient is known to be well several years after the operation. The ultimate result in the other 18 cases could not be determined. It is evident, therefore, that surgical procedures are generally useless unless the diagnosis is made early and the patient is operated on at once, the tumor being removed freely and widely.

11 Fibroids of Uterine Cervix.—The operation of splitting the uterus in difficult cases of pyosalpinx, suggested to Morison that by splitting the uterus down its center on and into a tumor removal of the growth might then be possible. The idea was carried out in one case and much to Morison's surprise when the tumor capsule was divided, the tumor turned

out easily and almost bloodlessly The halves of the split uterus were readily removed, and the operation was completed as an ordinary supravaginal hysterectomy, the cervix being left behind as a stump. Since then Morison has performed a similar operation between 20 and 30 times without any mortality

The abdomen is opened in the Trendelenburg posture, the intestines are packed off with sterile gauze wrung out of hot normal saline solution, and the uterus and tumor are exposed by a retractor at the lower angle of the wound The fundus of the uterus is caught on each side by volsellum forceps and drawn upward and forward into view The round ligaments are clamped by forceps on either side and divided between two pairs, one above and one below The peritoneum covering the lower part of the uterus and tumor is cut through transversely between the round ligaments and sponged downward The uterus is next split from its fundus down the middle line well into the tumor The edges of the tumor made distinct by retraction of the divided capsule are caught in volsellum forceps and the tumor is enucleated by the finger After enucleation the cavity quickly contracts, reducing the parts left to manageable dimensions The bed of the tumor is cut transversely from the middle line outward, first on one side and then on the other, and the body and upper portion of the cervix are turned out and up, exposing the uterine vessels which are clamped, divided and tied The remainder of the broad ligament is divided outward and upward till the infundibulo pelvic ligament containing the ovarian vessels is reached These are clamped, divided and tied The uterus and its appendages are then removed The anterior and posterior lips of the stump of the cervix left are sutured and the cervical stump is fixed to the round ligaments on each side Finally, the peritoneal flap in front is made to cover and protect the whole by three or four interrupted catgut sutures

12 **Appendicitis in Typhoid.**—Green reports three cases to show how difficult may be the task of deciding whether a patient is suffering from typhoid or appendicitis

13 **Sanitation and Infantile Mortality**—Divine claims that insanitation is a factor of considerable moment in infantile mortality

The Practitioner, London
February

15 *Treatment of Some Forms of Gout A P Luff
16 *Posterior Tarsal Resection of Foot by Method of Mikulicz and Wladimiroff A. Young
17 *Valvular Disease of the Heart R Crawford
18 Postpartum Hemorrhage. F S Bishop
19 Interpretation of Sphygmograph Tracings and of Tracings Produced by Compressing Brachial Artery T Lewis
20 Intracranial Abscess When and When Not to Operate J Wylie
21 Possibility of Two West African Diseases 'Akatama and Nonulo Being Malarial Paroxysmal Neuroses. F C Wellman

15 **Treatment of Gout**—Luff deals with the treatment of gout in some of its more frequently occurring forms Hydrotherapy, balneotherapy, light therapy, etc, is not discussed For relieving the local pain he recommends the following

℞	Sodii carbonatis	5iii	12
	Linimenti belladonnæ		
	Tincturæ opii, ää	℥ii	60
	Aquæ ad	℥viii	240

A small portion of the lotion should be mixed with an equal quantity of hot water, and then poured on cotton wool previously arranged around the joint The pad should be changed every four hours In connection with the acute paroxysm no attempt at local depletion such as the application of leeches to the inflamed joint blistering or incisions should on any account be made owing to the great liability of thereby extending the inflammatory condition, and so producing subsequent ankylosis or deformity

For the internal treatment a pill containing the following ingredients is given three or four times a day immediately after eating

℞	Colchicini	gr 1/60	.001
	Ext nucis vomicæ	gr ¼	.015
	Ext hyoscyami	gr ½	.03
	Ext gentianæ	gr i	.06

[The United States Pharmacopeia gives the dose of colchicina as 1/128 grain.—Ed.]

In addition to colchicum in small doses Luff recommends from 5 to 10 grains of guaiacum in cachets two or three times a day, in the treatment of subacute and chronic gout For the local treatment of gouty joints Luff advises elevation of the limb, application of a light flannel bandage and the use of hot and cold douches alternately, the Scotch douche and massage For the removal of edema he employs galvanism and massage

In cases of gouty hepatic inadequacy he has found the following mixture, taken 15 minutes before meals, most beneficial

℞	Sodii bicarbonatis	gr xii	7
	Tinct nucis vomicæ	m x	65
	Tinct gentian comp	ʒss	2
	Spiritus chloroformi	m xii	7
	Aquæ menthæ pip ad	℥i	30

16 **Posterior Tarsal Resection of Foot.**—Young reports one case of advanced tuberculous disease of the right tarsal bones in which posterior tarsal resection of the foot by the method of Mikulicz and Wladimiroff was done successfully A specially devised boot was fitted to the foot so well that for one not cognizant of the actual state of affairs it was practically impossible to detect any limp or defect in the gait

17 **Valvular Disease of the Heart**—Crawford reports 7 cases of tricuspid stenosis in all of which there was some affection of the mitral orifice with passive congestion of the lungs, of greater or less degree A thorough postmortem was done in each case

Journal of Tropical Medicine and Hygiene, London.
February 1

22 Study of the Evidence as to Source of Infection Which Caused the Cases of Tetanus at Mukowal Punjab India During Inoculation Against Plague in October 1902

Indian Medical Gazette, Calcutta
January

23 William Hamilton and the Embassy to Delhi D C Crawford
24 Epidemic of Malignant Jaundice in Bombay J J C Tucker
25 Experimental Investigations as to Potency of Various Disinfectants Against Rat Fleas W C Hossack
26 A Year's Experience of Malaria at the Outdoor Department of the Medical College Hospital Calcutta J W D Megaw
27 Leishman Donovan Infection in a Gurkha T A Cranicr
28 Hepatic Abscess and Joints in Diagnosis of Multiple Hepatic Abscess C G Gifford
29 A Possible Case of Malta Fever A G Newell
30 Operations for Extirpation of the Spleen O St J Moses
31 Case of Extrauterine Pregnancy A M Temke

Dublin Journal of Medical Science
February 1

32 Chyliform Ascitic Fluid T C Moorhead
33 Surgical Aspects of Bronchiectasis Particularly in Children and Young Adults C G Cumston

Bulletin de l'Académie de Médecine, Paris

36 (LXXI No 5 pp 161 178) *Early Diagnosis of Tuberculosis of the Bronchial Glands in Children (Diagnostic précoce de la tub des ganglions bronch) M A D Espine
37 Successful Hygienic Treatment of Tuberculosis in 100 Children Kept Constantly in the Open Air at the Rouen Public Hospital (Resultats du traitement hygienique à l'hôpital) Brunon

36 **Early Diagnosis of Incipient Thoracic Tuberculosis in Children.**—D Espine's further experience has confirmed his previous assertions in regard to the frequency of the primary localization in the bronchial glands of tuberculosis affecting the thorax and also the reliability of his method of diagnosing this primary tuberculous affection of the bronchial glands before involvement of the lung by auscultation of the voice In 1901 he published a report of 119 cases of the kind and his statements as to the unsuspected frequency of this primary localization of tuberculosis have been corroborated by the recent announcements of Vallée and Calmette in regard to the intestinal origin of tuberculous affections in the thorax Auscultation as the patient pronounces the words 'three hundred and thirty three' (the words are more resonant in the French—"trois cent trente trois") or auscultation as the child cries will reveal a tone superadded to the voice which he call "whispering" (chuchotement) in the first stage and bronchophony in the more advanced stage In the normal child the serum tone of the trachea stops abruptly at the spinous process of the seventh cervical vertebra where the lung commences but with a pathologic process in the bronchial glands the bronchial tone is heard further over the region corresponding to the principal location of the glands The bronchial organ tone is ac-

centuated by the chain of tumefied glands surrounding the air passage and sometimes continuing back nearly to the spine The stethoscope is useful to define the extent of the ronchophony, which may extend to the first four dorsal vertebræ or merely to one of them, or to the seventh cervical, but direct auscultation with the ear gives more definite results If the child is told to pronounce some words in a low tone, an acoustic phenomenon is noted in case of a bronchial adenopathy similar to what Baccelli calls "aphonious pectoriloquism" This D'Espine calls "whispering" (chuchotement) Pronounced dulness on percussion of the spinous processes of the first dorsal or seventh cervical vertebra does not appear until the process in the bronchial glands is in an advanced stage Interscapular dulness is likewise a sign of far advanced lesions, in the child, as also the bronchial souffle. The finding of this souffle associated with the normal superficial vesicular murmur indicates that the trouble is in the glands, not in the lungs He cites a number of instructive examples, among them the case of a healthy child of healthy parents, who, after spending the summer on a farm, exhibited slight fever for a time with marked bronchophony Anemia developed and the child succumbed in eight months to a tuberculous meningitis Autopsy disclosed tuberculosis of the mesenteric and bronchial glands and pericardium, but no lesions in the peritoneum or lungs It was found that the cow on the farm whose milk had been taken freely by the child was in an advanced stage of tuberculosis The father of the child was a physician and professor in the university (Geneva), and he inaugurated a campaign against tuberculosis in cattle which led to drastic regulations in regard to tuberculin testing of cattle. D'Espine adds that he has found the bronchophony almost constantly in the cases of surgical tuberculosis which he has encountered, as also in tuberculous meningitis Bronchophony has never failed him, while the most reliable other measure in this incipient, latent stage—radioscopy—sometimes fails, as in a case recently published by Mouriquand in which extensive glandular lesions gave no sign of their existence under Roentgen inspection

Berliner klinische Wochenschrift.

38 (XLIV, No 1 pp 1 28) *Postural Albuminuria (Orthotische Albuminurie.) O Heubner
39 *Abdominal Contusions (Bauchkontusionen) O Hildebrand
40 Diagnostic Significance of Specific Fixation of the Complement (Komplementfixation) A Wassermann
41 *Unusual Disturbances with Exophthalmic Goiter (Seltene Störungen bei der Basedowschen Krankheit.) M. Mosse.
42 *How Long Should Patients Be Kept in Bed After Laparotomies? (Wann soll man Coeliotomierte aufstehen lassen?) C Hartog.
43 Tuberculous Septicemia. (Tub Septikämie.) A Marmorek
44 Modern Obstetric Operations (Moderne geburtshilfliche Op) H von Bardeleben.
45 (No 2 pp 29-64.) *Action on Rabbit Aorta of Intravenous Injections of Suprarenin (Intravenöse Suprarenininjektionen) C Kaiserling
46 *Inoculation Tuberculosis in Guinea pigs. (Verlauf der Impf tub bei Meerschweinchen) H Beitzke
47 *Latent Tubercle Bacilli (Latente Tub Bac.) Lydia Rabinowitsch.
48 Experimentally Induced Meteorism (Exp erzeugten Meteorismus.) A Bickel
49 Concentration of the Secretion of the Stomach Fundus is Not Dependent on the Concentration of the Solutions Introduced Into the Stomach. (Reflektorisch abgeschiedener Magenfundussekret, etc.) O Schloss
50 *Study of Pancreas in Man (Einfluss der Zusammensetzung der Nahrung auf die Saftmenge und die Fermentconcentration) J Wohlgemuth.
51 Study of Cactus Alkaloids. (Zur Kenntnis des Pellotins.) L. Pincussohn.
52 Lipolysis, Agglutination and Hemolysis. (Lipolyse etc.) C Neuberg and E Rosenberg

38 **Postural Albuminuria.**—It has long been a disputed question whether the albuminuria which vanishes when the patient reclines is physiologic or functional, or the result of actual disease of the kidney Heubner brings an important contribution to the subject with the postmortem findings in the case of a child in whom this orthostatic albuminuria had been observed during life and who succumbed to an intercurrent brain tumor He states that the kidneys were sound macroscopically with the exception of congestion in the organs, without extravasation or hemorrhage There was also an extremely slight tendency to fat infiltration at a few points, and a minute focus of degeneration, 1 x .5 mm. on the surface He attributes these slight changes to the long death agony in the case They were too trivial to be considered, he thinks, in connection with the orthostatic albuminuria which had been observed for a year and a half A small tuberculous lesion was found at one apex, which confirms the view held by some observers that the postural albuminuria is a "pretuberculous" phenomenon

39 **Abdominal Contusions**—Hildebrand discusses the present status of treatment of contusion of the abdomen, reviewing 48 severe cases from his experience In 31 cases the operation was performed early, 22 of these patients recovered, and 9 died, all the 6 patients with a tardy operation recovered also Modern surgery can combat incipient peritonitis, but in the later stages it is difficult to handle. The vital energies can be sustained by administering solutions in extensive hemorrhage If the vital energies have already ebbed too low, then the surgeon is powerless The diagnosis and decision as to operation can be made only by a specialist of wide experience, consequently it is of the utmost importance, Hildebrand asserts, that the patient after contusion of the abdomen should be brought to the specialist without delay In one case the intraperitoneal part of the full bladder had ruptured and a loop of small intestine had fallen into the bladder He sutured the bladder and transplanted the attachment of the peritoneum to the bladder, suturing it at a point lower down than normal, and thus making the seat of the wound extraperitoneal. There is no danger of peritonitis from rupture of the bladder, he adds, if the rupture is entirely extraperitoneal.

41 **Unusual Disturbances with Exophthalmic Goiter**—In one case, Mosse states, the disease had been much improved by treatment, but Graefe's sign persisted on the right side and ptosis of the lid on the other In the second case the thyroid gland was not enlarged, but the other symptoms of exophthalmic goiter were pronounced. The cardiac arrhythmia was unusually prominent. In 2 other cases Mosse observed glycosuria in connection with exophthalmic goiter

42 **When Can a Patient Get Up After a Laparotomy?**—Hartog states that at Landau's clinic, where he is assistant, the patients are allowed to get up much earlier than used to be the rule They are asked the second day if they wish to get up, and if they reply affirmatively they are allowed to do so The only exception is in case of plastic operations and hernias In constitutional affections, such as diabetes, great importance is placed on having the patients leave the bed early The general rule is that each patient is given a saline enema at body temperature, commencing from 6 to 24 hours after the operation, and repeated every three to four hours, introducing under very slight pressure, and very slowly, about 250 gm of a 0 9 per cent. salt solution, that is, from half to three quarters of a tablespoonful of salt in a glass of water If no flatus has passed by the end of the second day, a pint of cold water is injected, followed later, if necessary, by a glass or a pint of soapy water Forty eight hours after the operation one or two tablespoonfuls of castor oil are given in bouillon or brandy or in the foam of beer The exceptions to these rules are the patients after vaginal operations with forceps and after laparotomies with drainage, in which case the castor oil is not given until after 72 hours Stimulating the peristalsis by this means relieves the patients of flatulence, and no inconveniences have ever been observed during the five years in which it has been done Ileus has never presented in any patient thus treated, and no painful adhesions, while these are liable to form if the bowels are left too quiet The day after the operation the position of the patient is changed, to allow the patient to lie on the side, the upper part of the trunk is raised, and the legs are drawn up In case of an uneventful primary healing, without drainage, they are allowed to get up by the middle or the end of the first week. The advantages of getting up thus early are obvious, especially the avoidance of thrombosis and embolism and of pulmonary complications

45 **Influence of Suprarenal Preparations on Rabbit Aorta.**—All the articles in No 2 of the *Berliner klinische Wochenschrift* issue from the Pathologic Institute at Berlin, of which J Orth is director, the occasion being a tribute on his sixtieth birthday He is Virchow's successor in the institute and also editor of *Virchow's Archiv* Kaiserling's experiments on rabbits

were not confirmatory of those of others in regard to the effect on the aorta of injection of suprarenal preparations He has found similar lesions in the rabbit aorta without injection of these preparations, and remarks that we know so little in regard to the influence of adrenalin on the arteries that it is absurd to attempt to draw any conclusions in regard to the functions of the suprarenals

46 **Inoculation Tuberculosis in the Rabbit.**—Beitzke has been studying the course of tuberculosis in 150 guinea pigs inoculated in the abdomen with scraps from human tuberculous lesions He found that the tubercle bacilli were generally disseminated by way of the lymph, through the thoracic duct and the blood, thus finding their way to the lungs and bronchial glands or settling primarily in the latter

47 **Latent Tubercle Bacilli.**—Rabinowitsch relates experiences with inoculation of rabbits with scraps of bronchial and mediastinal glands from children or adults clinically free from tuberculous processes The glands had been the seat of tuberculous inflammation and had degenerated until they were completely calcified and had evidently been in this condition for a long time, as parts were hard as stone Microscopic examination was negative, but inoculation of animals revealed that the glands contained tubercle bacilli still retaining their virulence, notwithstanding their long latency

50 **Functions of the Pancreas and Influence of the Character of the Food.**—Wohlgemuth reports the findings in the case of a young man left with a fistula into the pancreas after rupture of the organ in a bicycle accident. Experiments with various kinds of food to determine which kind induced the least secretion of pancreatic juice, and thus had a tendency to promote the healing of the wound, showed that the production of the pancreatic juice could be readily controlled by care in selection of articles of food. Fats and albumin checked the production of the pancreatic juice, while the carbohydrates induced a copious secretion. The secretion could be further reduced in amount by frequent administration of moderate doses of sodium bicarbonate, especially during the meals It was also found possible to substitute the loss of pancreatic juice through the fistula by administration of a pancreas preparation by the mouth several times a day When the patient ate fat in the form of cream and milk the pancreatic juice ceased to flow from the fistula After eating meat, it flowed again a little, but on a carbohydrate diet an actual stream poured out of the fistula

Centralblatt für Gynäkologie, Leipsic

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5 (XXX No 48 pp 1321 1344) *Technic and Indications for Pubiotomy (Pubiotomie) W Zangemeister
54 *Experiences with Pubiotomy (Pubiotomie) K. Reifferscheid (Hebotomie) H B Semmelink.
55 (Nos 49 50 pp 1345 1392) *Prevention of Puerperal Mastitis (Mastitis) A. Döderlein.
56 *Determination of Ergot in the Stools (Mutterkorn in den Fäces) J Strasburger
57 The Cranial End of Müller's Duct (Eine Fortsetzung der Fimbria ovarica als Kanal im Hilus ovarii) J Kocks
58 (Nos 51 52 pp 1393 1440) *Origin and Treatment of Inversion of the Uterus. (Inversio uteri) K. Holzapfel
59 *Infusion of Oxygen in Treatment of Asphyxia in the New Born (Sauerstoffinfusionen asphyktischer Neugeborener) Offergeld.
60 Origin of Arteriomesenteric Occlusion of Duodenum (Arteriomesenterialverschlusses des Duodenums.) H Albrecht
61 (XXXI No 1 pp 1 32) *Passage into the Bladder of a Gauze Sponge Left in Abdomen After a Laparotomy (Gazetupfer in die Blase) W Stoeckel
62 *Looping of Umbilical Cord and Its Supposed Disadvantages After Emergence of Face (Nabelschnurumschlingung) F Holzbach
63 Decapsulation of Kidney with Puerperal Eclampsia (Nierendekapsulation) O Polano
64 (No 2 pp 33 64) *Technic of Scopolamin Morphin Anesthesia in Obstetrics (Skop Morph Dämmerschlaf) C J Causs
65 Repeated Pubiotomy on Same Patient (Wiederholte Pubiotomie) Heller
66 Mono amniotic Twins with Interlooped and Knotted Umbilical Cords. (Monoamniot Zwillinge) W Plitz.

53 **Technic and Indications for Pubiotomy.**—Zangemeister advises inserting the needle from below, and expectant treatment after the bone has been sawed Spontaneous delivery then frequently occurs He describes two cases in which the saw was introduced and left in place while version was done after which the child was readily delivered although the bone had not been sawed In some of the published cases in which the pubiotomy was done first the success may have been erroneously attributed to the sawing of the bone when in reality, delivery might have proceeded smoothly without it

54 **Further Experiences with Pubiotomy.**—Reifferscheid reviews his experiences with 22 cases in which pubiotomy was done at the Bonn clinic. One of the patients succumbed to pulmonary embolism, and in 2 others the bladder was seriously injured. Laceration of the perineum was observed in another case, and thrombosis of the femoral vein occurred during the puerperium in another, while one patient had slight exudation at the wound Slight fever during the puerperium was observed in 13 cases Forceps were required in 8, version in 9, extraction in 3, and in 2 instances delivery occurred spontaneously In 4 cases the saw was introduced, but no sawing was done until the signs showed that it was imperatively needed All the children left the clinic alive The greatest danger is injury of the bladder, which is pressed forward and over the edge of the symphysis by the enlarged uterus The much curved Bumm needle is safest, as it curves close around the upper edge of the symphysis It will not be possible always to avoid injury to the bladder with the subcutaneous Bumm technic as the bladder may be fastened to the symphysis In both Reifferscheid's cases of injury there had been previous febrile childbirths It might be safer, therefore, he says, to make a small incision at the upper edge of the symphysis and detach the periosteum from its posterior surface Even then, injury of the bladder is possible against the sharp cut edges of the bone as the child is delivered and the bone spreads The statistics of pubiotomy to date are 12 deaths in 202 cases, a much higher mortality than with artificial premature delivery (5 94 with pubiotomy and 1 4 per cent with artificial delivery), but the prospects for the child are much better with pubiotomy Semmelink relates a case of injury of the bladder while he was introducing a Seeligmann needle preliminary to drawing through the wire saw

55 **Prevention of Puerperal Mastitis.**—Döderlein has found a solution of rubber and benzin with 1 per cent formalin useful as a protecting coat for the skin The benzin evaporates leaving a thin impervious coating fitting tight over the skin while the formalin has direct bactericidal action He first cleanses the parts with iodin benzin, then paints them with tincture of iodin and then applies the rubber mixture This preparation before laparotomies and vaginal operations has been found successful in eliminating all tendency to wound infections Applied to the nipple it protects it against cracks and fissures and thus tends to ward off mastitis The outlets for the milk are closed by the rubber, but the pellicle is so delicate that it breaks at these points as the child sucks After nursing the breast can be washed in water or alcohol as usual, for the rubber pellicle does not dissolve except with benzin ether or chloroform The mixture is applied every two or three days and in an experience with 200 patients there has been no tendency to mastitis in any instance

56 **Ergot in the Feces.**—Strasburger was able to detect particles of ergot in the feces after its administration by the mouth to several different persons and to dogs The microscopic findings were positive even after a single dose of 1 gm He regards this as possibly important in certain cases from a medicolegal standpoint or to determine ergot poisoning in bread The findings were positive only during from 24 to 36 hours after administration of the ergot

58 **Inversion of the Uterus.**—Holzapfel describes a case of total inversion of the uterus after childbirth He ascribes the inversion to atony, which assumption is supported also by the unusually large proportion of inversions after still births If the atony is neglected serious results are liable to follow He thinks that greater attention should be paid to supervising the final stage of delivery leaving the child unattended until the birth is complete

59 **Treatment of Asphyxiated New Born Infants with Infusion of Oxygen.**—Offergeld has tried infusion of oxygen through the umbilical vein in 12 cases of asphyxiated new born infants Only 3 of the children were revived, and his opinion of the oxygen infusions is decidedly unfavorable He

is even inclined to regard them as responsible for extinguishing the last spark of life. He regards Schultze's swinging as not entirely free from danger, and is more favorably impressed with Ahlfeld's method of prolonged warm baths combined with artificial respiration. He states that it is sometimes astounding to witness the revival of the child after persevering continuance with this method for an hour or more.

61 **Removal from Bladder of Gauze Left After Laparotomy**—Stoeckel reports a case of fistula in the abdominal wall after an ovariotomy with suture of the bladder. The cystoscope showed that a gauze sponge left in the abdomen over the bladder wound had perforated into the bladder. It was drawn out with forceps and the subsequent hemorrhage was easily controlled. He remarks that such mishaps are liable to occur with the most careful surgeons and those who have caustic criticism for anything of the kind are generally those whose operative experience is not very extensive.

62 **Loop of Umbilical Cord Around Neck.**—Holzbach presents arguments to show that after the face is once delivered there is no further danger for the child from a loop of the umbilical cord around its neck, while there is likely to be grave danger for the mother if attempts are made to remove the loop from the child's neck. The traction may detach the placenta or injure the vessels in the cord or do other damage.

64 **Scopolamin-Morphin Anesthesia in Obstetrics**—Gauss describes the technic and results of scopolamin morphin anesthesia as applied in 1,000 cases at Krönig's clinic at Freiburg. The drugs are given in gradually increasing amounts until the patient dozes without knowledge or memory of what is going on, but also without the profound sleep of general anesthesia. The labor pains must occur with a certain frequency and intensity before the anesthetics are administered. For this reason, primary weak labor pains are regarded as one of the few contraindications to the application of the technic. At first 1/200 gr. (0.0003 gm.) of scopolamin and ¼ gr. (0.01 gm.) of morphin are injected, and later a second dose of scopolamin, without morphin. The total is generally about 1/150 gr. (0.00075 gm.) scopolamin, and ¼ gr. (0.01 gm.) morphin, but sometimes a little more may be required. The patient's power of perception is the test as to dosage, and this is determined by briefly showing her some object at half hour intervals and asking her if she had seen it when shown it before. If she says yes, this shows that she was conscious when she was first shown it. This test is repeated with new objects each time, the aim being to keep the patient in the "twilight sleep," that is, so drowsy that the powers of perception and memory are lost while she is still conscious to a certain extent.

Deutsche Zeitschrift f. Chirurgie, Leipsic.
Last indexed XLVII pages 466 and 535

67 (LXXXIII, Nos. 1-2, pp. 1-211.) Appendicitis and Icterus. (App. und Ikterus.) P. Reichel.
68 *Pathology and Treatment of Abscess in the Spleen. (Milzabszess.) L. Kirchmayr.
69 Hindrances to Reduction in Preglenoid Dislocation of the Shoulder with Special Regard to Subcoracoid Luxation. (Schultergelenkluxation.) T. Bach.
70 *Pathology and Treatment of Congenital Displacement of the Kidney. (Nierendystopie.) M. Strater.
71 *Subcutaneous Extirpation of Enlarged Veins in the Legs. (Subkut. Exstirpation ektatischer Venen.) A. Narath.
72 Plexiform Neuroma. (Rankenneurom.) M. Strauss.
73 Pathology of the Patella. (Kniescheibe.) Creite.
74 Experimental Research on Etiology of Fat Tissue Necrosis and Changes in the Liver in Injury of the Pancreas. (Fettgewebsnekrose und Leberveränderungen bei Schädigung des Pankreasgewebes.) E. Payr and A. Martina.
75 Six Cases of Syringomyelia. (Syringomyelie.) O. Luders.
76 (Nos. 3-4, pp. 213-400.) *Clinical and Histologic Study of Transplantation of Skin Especially Sowing with Epithelium. (Hautverpflanzung und Epithelaussaat.) K. Noesske.
77 *Absorption by the Peritoneum and Means to Influence It in Peritonitis. (Bauchfellresorption.) P. Glimm.
78 *Suture of the Heart for Stab Wound. (Herznaht.) E. Tschernlachowski.
79 Myxo-fibrosarcoma of Bursa in the Heel. (Myx. der Bursa achillea post.) A. Martina.
80 *Operative Treatment of Inguinal Hernia in Children. (Ing. hernien bei Kindern.) Bühlmann.
81 Treatment of Gangrenous Inguinal and Femoral Hernias. (Leisten und Schenkelbrüche.) H. Barlocher.
82 Total Dislocation of Half of Pelvis. (Lux. einer Beckenhälfte.) Creite.
83 *Ureter Catheters Impermeable to Roentgen Rays. (Röntgenschatten gebende Ureterenkatheter.) R. Göbell.

68 **Abscess in the Spleen.**—The diagnosis in Kirchmayr's case was based on the sudden rise in temperature, the peculiar cup shape of the area of dulness at the lower margin of the left pleura, and the fact that the patient was recovering from a mild attack of typhoid fever. Pure cultures of the typhoid bacilli were cultivated from the pus. The pleural cavity was opened after resection of 10 cm. of the tenth and eleventh left ribs, and the costal pleura was sutured to the diaphragmatic pleura, thus bringing the tumor outside of the thorax. The wound was then closed with gauze. Four days later the protruding part of the diaphragm was opened through the same incision, allowing the escape of pus and a piece of spleen tissue 3x5 cm. The surface of the spleen was adherent to the peritoneal surface of the diaphragm. The patient was dismissed cured about eight weeks after the first operation.

70 **Treatment of Congenital Dislocation of the Kidney**—Strater warns against hasty measures in operating for displaced kidney as ligation of vessels, or heedless drawing forth of the tumor, whose nature is still unsuspected, may do irreparable damage to a perfectly sound kidney, whose only fault is to be out of its normal place. Seven cases are on record in which the tumor was extirpated and then found to be the sound kidney or was injured so much in exposing it that it had to be removed. Warnings against such procedures are not out of place, as study of the literature shows. In 2 of the cases the extirpated kidney was the only one existing. When the misplaced kidney causes no symptoms it should be left alone, as a rule. Even when symptoms are present, careful research should be made for some other cause. In several instances removal of diseased uterine adnexa put an end to all the symptoms without interference with the misplaced kidney. In case of symptoms attributable to the displacement, especially obstinate constipation, even a slight change of position for the kidney may remove the pressure from the bowel. An attempt should always be made to move the kidney and to fasten it at some more convenient point, reserving nephrectomy as the last resort. In beginning pregnancy, if there is a prospect that the displaced kidney will interfere with delivery, Strater advises nephropexy even if the displaced kidney is causing no symptoms. In advanced pregnancy, if the displaced kidney interferes with delivery, an operation to enlarge the pelvis is indicated rather than the removal of a sound kidney. In case the kidney is degenerated, it may be reduced in size by puncture or extirpated, but a healthy kidney, he reaffirms, is by no means an organ that can be casually removed.

71 **Subcutaneous Removal of Varicose Veins on the Leg**—Narath states that for years he has operated on varicose veins by mobilizing them through a series of very small incisions at intervals. It is thus possible to mobilize long stretches of the vein and to resect them in one piece through a row of button hole incisions. He describes his technic as performed on a large number of patients.

76 **Sowing with Epithelium in Transplantation of Skin**—Noesske reports experiences with von Mangoldt's method of sowing raw surfaces with tiny particles of epidermis obtained by scraping the skin, thus obtaining a formless mass of blood and tissue. The edge of the razor is held perpendicularly, the skin below being stretched tight with the other hand. The first scraping of the surface is discarded, the fine punctate bleeding as the tops of the papillæ are cut off shows that the proper layer has been reached, the one with the most vitality. The mixture of blood and epithelial cells resulting from the scraping is then transferred directly to the surface to be covered and is spread out evenly over it, after which the technic is the same as for Thiersch flaps. He gives clinical and histologic studies of the results, affirming that the method is much simpler and more convenient and that much less substance is required to cover extensive surfaces than with other techniques. This sowing with epithelium has special advantages, he declares, for lining cavities in the long bones after operations for osteomyelitis and the like. The cosmetic results are better than with the Thiersch flaps, but a longer time is required for the healing. This disadvantage is compensated by the fact that the simple operation can be repeated at any time if the islands of cells that have taken root do not enlarge rapidly enough. The new covering is delicate and the method is thus best adapted for surfaces not exposed to friction. As

the new formed skin does not contain sebaceous glands, it is liable to crack and ulcerate under long continued irritation, the same as the Thiersch flaps, but in its own domain it gives extremely satisfactory results He cites as an example the rapid healing over of a defect left after removal of an extensive mammary cancer He applied Thiersch flaps around the edges, but the central portion of the large defect was covered with the epithelium Two years later the central portion looks smooth and comparatively white, while the Thiersch flaps healed unevenly, with wrinkles and brownish pigmentation He has found that spraying with ethyl chlorid seems to hasten the proliferation of the transplanted epithelial cells

77 Absorption by the Peritoneum.—Glimm writes from Loeffler's Hygienic Institute to relate the result of research which demonstrates that bacterial infection of the abdominal cavity promotes absorption by the peritoneum If the absorption of the bacteria can be checked, the course of the peritonitis is favorably influenced. He has found that injection of oil checks the absorption of bacteria in case of peritonitis due to the colon bacillus, and thus influences the peritonitis favorably The concordant results of experiments on 50 dogs and rabbits encourages him to attempt injection of about 130 c c of 1 per cent camphorated oil in cases of peritonitis in the clinic when the outlook is absolutely bad, after the failure of all other measures He also thinks that the injection of oil might be successfully tried in cases of encapsulated abscesses that show no tendency to heal under appropriate treatment He asserts that no harm can possibly result, while the benefit might be great He warns against prophylactic injections, as the tolerance of the normal human peritoneum for oil has not been determined as yet

78 Suture of the Heart.—Tschermachowski adds another to the 80 cases of suture of the heart he has found on record, and summarizes the details of each The pleura was involved in all but 7 cases The mortality was 44 per cent. in the 25 cases in which the pleura was sutured, while it was 55 55 per cent in the 27 cases in which the pleural wound was merely tamponed. The mortality was twice as great in the 42 cases in which the pericardium was sutured at once, as in the 23 cases that were drained (59 42 per cent and 34 78 per cent) The total mortality of the 74 stab wound cases was 43 24 per cent., and of the 9 bullet wound cases 55 55 per cent The symptoms are frequently misleading, the severest wounds sometimes causing slight symptoms, and vice versa

80 Operative Treatment of Inguinal Hernia in Children.—Bühlmann reviews the literature on the subject and describes the experiences at Tavel's clinic at Berne, with summaries of the cases Operation was undertaken in 198 instances His conclusions are absolutely unfavorable in regard to trusses for children, as they afford no guarantee of permanent cure Operative treatment is indicated, he says, whenever a hernia is noticed in a child, regardless of age The earlier it is done the easier the technic, from the absence of adhesions Direct hernia is extremely rare in infants. Tavel's technic does not require more than ten or fifteen minutes, and the child is freed at once from the discomfort of years of truss wearing The principle is the same as in the Broca and Stiles technic, recurrence has never been observed The hernial sac is resected and the stump pushed back into the abdominal cavity, and the inferior and superior pillars are sutured together in front of the seminal cord with three interrupted sutures with No 3 silk The vessels are ligated with No 2 silk, which is also used to suture the skin, with a straight needle The anatomic conditions in children are studied and illustrated

83 Ureter Catheter Impermeable to the Roentgen Rays.—Göbell refers to the advantages of using a catheter for the ureter that casts a shadow under the Roentgen rays in case radioscopy becomes necessary This is easily accomplished by coloring with vermilion or cinnabar the lacquer used in making the catheter He has his catheters thus made with every alternate centimeter black or red, which aids in cystoscopy

Hospitalstidende, Copenhagen.

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84 (XLIX, No 46 pp 1229 1272) Case of Congenital Total Color Blindness and Theoretical Study of Visual Perception (Total Farveblind) H Lange

85 (Nos 47-48 Pp 1253 1300) *Diagnosis of Apoplexy (Apoplexiens Diagnostik.) A. Friedenreich.

86 Case of Progressive Muscular Atrophy with Autopsy (Dystrophia musc. progr) K. Malling

87 (Nos 49-51 Pp 1301 1372) Vision and Its Physiochemical Basis. (Om. Synet og dets fysisk kemiske Grundlag) V Meisling

88 *Spermatocystitis with Gonorrheal Epididymitis (Gonorrhoea hos Manden.) A. Brönnum

89 (No 52 Pp 1373 1390) *Transmission of Human Tuberculosis to Cattle. (Overførelse af Mennesketuberkulose til Kvæget)

90 (I, Nos 1 2 Pp 1-48) Multiple Endotheliomata of the Scalp (Multiple Endotheliomer i Hovedets Hud) P Haslund

91 Varying Density of the Islands of Langerhans and Study of Their Formation. (Undersøgelser over Bugspytkirtlen) K. A. Helberg

85 Differentiation of Apoplexy.—Friedenreich has been studying the points which differentiate hemorrhage in the brain from softening on a basis of arteriosclerosis Since 1900 about 422 patients with apoplexy have been treated at the public hospital and 256 succumbed Of this number 201 came to autopsy, and in 5 both cerebral hemorrhage and softening were found. This leaves 197 cases for research on the differentiating points, as softening of the brain was observed in about a third and cerebral hemorrhage in the others After critically sifting and reviewing the various symptoms observed and comparing them with the postmortem findings, he summarizes the signs that indicate cerebral hemorrhage as follows Severe onset especially with profound coma, and inability to move the limbs in the total and extensive cerebral paralysis which frequently is rapidly fatal, blood stained cerebrospinal fluid on lumbar puncture, age under 55 (especially under 50), low temperature at first, if no other cause for the subnormal temperature can be discovered, possibly a mild epileptic seizure as the initial symptom retinal hemorrhage and rigidity of the paralyzed limbs, especially of the arms Further useful signs, although of comparatively less importance, are hypertrophy of the heart without a valvular defect, albuminuria or nephritis, and normal or hyperemic papilla, and the vessels in the retina well filled or gorged There are no pathognomonic signs for acute softening but the absence of initial loss of consciousness, with the serious paralysis and with the rarer partial, dissociated paralysis suggest softening rather than cerebral hemorrhage Further useful signs are the incompleteness of the paralysis, pale papillæ and undistended retinal vessels Sometimes the paralysis comes on gradually and there may be restlessness and vagueness A valvular defect also points to softening, and likewise the determination of a prodrome or previous attack, or senile epilepsy Low blood pressure, if no other cause for it can be assigned, also points to softening also clear cerebrospinal fluid In the cases reported the hemorrhage was differentiated during life in 89 out of 108, and softening in 40 out of 63, the diagnosis being correct therefore in an average of 3 in every 4 cases During the later series the data collected and recorded in this article enabled still more frequent accurate differentiation

88 Involvement of Seminal Vesicles with Gonorrheal Epididymitis.—Brönnum relates that he was able to express the pathologic secretion from the seminal vesicles after urination, expression of the prostate, renewed urination and rinsing out of the urethra with a solution of boric acid The bladder is then filled with the boric acid solution the catheter withdrawn and the seminal vesicle on the side of the epididymitis is manipulated with the fingers The contents of the bladder are then withdrawn and centrifugated and the sediment examined for leucocytes and gonococci He had positive findings in this respect in 16 out of 20 cases of gonorrheal epididymitis at the Frederiksberg Hospital that is in 80 per cent In the other cases leucocytes were found without gonococci and in only one case were the findings negative The seminal vesicle was swollen in 15 of the cases He noted enlargement of the seminal vesicle in a number of other cases not included in these statistics, which are restricted to the cases in which the above technic or expression was applied He calls it the complete expression method (full technic Expressionsmethode) and advises its application in every case of gonorrheal epididymitis although not at every examination It is never safe to use it except for the vesicle on the affected side He examines the centrifugated sediment with reference Hue for gonococci

tion under the microscope, and uses the Gram technic in dubious cases. The careful preliminary expression of the prostate and cleansing of the urethra eliminate, he thinks, the danger of error from admixture of secretion from other points. He is careful to restrict the palpation to the single seminal vesicle involved.

89 **Transmission of Tuberculosis from Cattle**—Jensen and Fibiger's third report on their extensive researches in this line describes 2 cases of fatal primary intestinal tuberculosis in the digestive tract with incipient miliary tuberculosis of the lungs and liver. The patients were children who had been fed with milk from different dairies, including one having tuberculous cattle. The development of a tuberculous udder affection in one of the cows corresponded with the date of the development of the tuberculous affection in the child later, in one case. Bacilli from both cases displayed great virulence in inoculation of calves and rabbits. They add that it is difficult to imagine more convincing testimony as to the danger from raw milk than these cases present. Similar testimony in the literature is collected and analyzed, with the result that Jensen preaches that the theory as to the rarity of primary tuberculosis of the intestines will have to be abandoned as the evidence on hand of the contrary is so convincing. He asserts that tuberculous infection of the digestive tract has a far greater share in the prevalence of tuberculosis than has hitherto been imagined, and especially infection from cattle. Whether adults are less susceptible than children to infection from tuberculous cattle is still an undecided question which he is now investigating, along with the importance of the changes induced in tubercle bacilli by passage through man and through cattle.

Hygiea, Stockholm.

Last indexed XLVII page 1143

92 (LXVIII No. 8, Pp. 705-832.) Elimination of Mercury Through the Urine. (Kvicksilfrets afsöndrande genom urinen.) E. Welander.
93 Clinical Cure in Case of Pseudoleukemia under Roentgen Rays. (Röntgen ljusets inverkan på blodet.) E. Wikner.
94 (No. 9, Pp. 833-960.) The Birth Rate in Modern Times and the Prospects for the Future. (Nativiteten i nutiden och dess framtidsutsikter.) P. Fahlbeck.
95 *Primary Tuberculosis of the Kidneys with Especial Regard to Diagnosis and Symptoms. (Primär njurtuberkulosen.) G. Ekehorn. Concluded in No. 10.
96 Marmorek's Antituberculosis Serum. (Marmorek's serum mot tub. sjukdomar.) F. E. v. Sydow.
97 (No. 10, Pp. 961-1088.) *Case of Volvulus of Small Intestine with Meckel's Diverticulum and Study of 'Subacute Ileus' and Gastrostomy for Paralysis of Small Intestine. (Tunntarmsvolvolus och tunntarmsparalys.) K. G. Lennander.
98 Which Cases of Pulmonary Tuberculosis Are Adapted for Treatment in a Public Sanatorium? (Folksanatorievård.) J. Tillman.
99 Gonorrhea in Prostitutes. (Gon. hos prostituerade.) F. Sandman.
100 (No. 11, Pp. 1089-1216.) *Epidemic of Acute Paralysis Following Anterior Poliomyelitis in Sweden 1905. (Om den s. k. akuta barnförlamningen.) H. Lundgren.
101 School and Transmissible Diseases. (Skolan och de smittosamma sjukdomarna.) G. Steenhoff.
102 *Experiences with Cataract Operations.* (Om starroperationer.) V. L. Lundberg.
103 Sterilization of Catgut by Boiling in Alcohol. (Sterilisering af katgut genom kokning i absolut alkohol.) P. Clarholm.
104 Diagnostic Importance of Abdominal Reflexes in Atypical Multiple Sclerosis. (Atypisk multipel skleros.) E. Rodhe.

95 **Tuberculosis of the Kidneys**—Ekehorn gives the details of 41 cases of primary tuberculous affections of the kidneys. He announces as a rule that it is not sufficient to catheterize the ureter alone if the findings show that the kidney above is diseased. On the other hand, it is unnecessary to catheterize the other ureter if the urine is found free from pus and tubercle bacilli, with manifest signs of a tuberculous process in the other kidney. Catheterization of the ureters is indispensable in many cases, as even exploratory incision may give misleading findings and a single cystoscopic examination without catheterization of the ureter may give deceptive findings. Functional tests of the urine, such as cryoscopy, he states, are of subordinate importance.

97 **Paralysis and Volvulus of Small Intestine**—Among the lessons learned from the case of volvulus of the small intestine described, and from a recent case of acute dilatation of the stomach and other similar experiences, Lennander mentions especially that when the stomach or small intestine becomes stretched beyond a certain point it can not contract until it is partly emptied. The extreme stretching prevents muscular contraction. The extremely distended, but not paralyzed, intestine appears to be paralyzed when it is inspected, but if an opening is made into it and some of its contents removed, the muscle is then able to contract and it will empty itself spontaneously through the fistula. The really paralyzed intestine does not contract, and, to enable it to recover, the enterostomy must be made proximal to the paralyzed portion. In case the paralysis involves the upper part of the duodenum the fistula will have to be made in the pyloric part of the stomach. He makes it a rule to do this gastrostomy without delay when, after he has emptied the small intestine and jejunum, the jejunum shows no signs of contracting. He also does gastrostomy in cases in which there are no indications for it at the laparotomy, and yet the abdomen continues to increase in size, the pulse rate grows more rapid or remains fast, and lavage of the stomach, repeated two or three times, gives findings indicative of retention of fluids with a disagreeable odor. These, he reiterates, are ample indications for performing gastrostomy without further delay. Since treatment on these principles has been introduced in his clinic the outcome in such cases has been immeasurably better.

100 **Epidemic of Acute Anterior Poliomyelitis Occurring in Sweden During 1905**—Lundgren traces the clinical picture of the disease as observed in 147 cases in the Växjö district. There were 403 cases in the entire epidemic which commenced in April and reached its highest point in August and September, no case has been known since the beginning of 1906. The incubation seemed to be about 8 or 10 days, and a prodromal period followed lasting from 1 to 3 days, with headache, vomiting, stiffness in the back of the neck, pains in the back, fever, and somnolence in the smaller children, with convulsions in some cases. The symptoms subsided after a few days, leaving a certain weakness in the arms or legs and a staggering gait in some cases. In the majority, however, as the initial symptoms subsided, a gradual paralysis was observed, with paresis of the bladder, and in one case, disturbances in sight and in another of hearing, with loss of speech in a number. The mortality was about 10 per cent. Permanent paralysis was left in about 25 per cent. of the cases.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review as dictated by their merits, or in the interests of our readers.

Text Book of Psychiatry. A Physiological Study of Insanity for Practitioners and Students. By Dr. E. Mendel, A. O. Professor in the University of Berlin. Authorized Translation Edited and Enlarged by William C. Krauss, M. D., Buffalo, N. Y. Neurologist to Buffalo General Hospital. Cloth. Pp. 311. Price $2.00 net. *Philadelphia: F. A. Davis Company. 1907.*

Paraffin in Surgery. A Critical and Clinical Study. By W. H. Luckett, B. S., M. D., Attending Surgeon, Harlem Hospital, and Frank I. Horn, M. D., Assistant Surgeon Mt. Sinai Hospital Dispensary, New York City. With thirty-eight illustrations. Cloth. Pp. 118. Price $2.00. New York: Surgery Publishing Company, 1907.

Thirty Seventh Annual Report of the Board of Managers and Superintendent of the New York State School for the Blind, Batavia, N. Y., For the Year 1904-1905. Transmitted to the Legislature March 1, 1906. Paper. Pp. 121. Albany: Brandow Printing Company.

A Pocket Formulary. By E. Quin Thornton, M. D., Assistant Professor of Materia Medica in Jefferson Medical College, Philadelphia. Eighth Edition Revised. Leather. Pp. 287. Price $1.50 net. Philadelphia and New York: Lea Bros. & Co. 1907.

Manual of Clinical Chemistry. By A. E. Austin, A. B., M. D., Professor of Medical Chemistry and Toxicology in the Medical Department of Tufts College, Boston. Cloth. Pp. 278. Price $1.75. Boston: D. C. Heath & Co. 1907.

Plaster of Paris and How to Use It. Martin W. Ware, M. D., Instructor of Surgery in the New York Postgraduate School. Cloth. Pp. 88. Price $1.00. New York: Surgery Publishing Company. 1906.

Annual Report of the Surgeon General of the Public Health and Marine-Hospital Service of the United States for the Fiscal Year 1906. Cloth. Pp. 255. Washington: Government Printing Office. 1907.

Diagnosis and Treatment of Intussusception. By Charles P. B. Clubbe, Hon. Surgeon to the Royal Prince Alfred Hospital. Cloth. Pp. 92. Edinburgh and London: Y. J. Pentland. 1907.

Thirty Sixth Annual Report of the Central State Hospital of Virginia, Petersburg, for the Fiscal Year Ending September 30, 1906. Paper. Pp. 86. Richmond: Davis Bottom, 1906.

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Original Articles

THE ORGANIZED MEDICAL PROFESSION AND SOME OF ITS ENEMIES *

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THE BASIS OF AN ORGANIZED PROFESSION

The medical profession becomes organized, medical associations are formed, principally for these two purposes to increase and diffuse medical knowledge and to elevate and maintain the ethical standards of the profession Other important purposes may be served by our professional organizations The guidance of the community in relation to matters of public health and hygiene is often, and properly, matter for consideration in medical societies, and special societies may be formed among the medical profession devoted to such particular purposes, as for the eradication of tuberculosis or trachoma Again, medical societies sometimes act to protect the interests of the individual members of the profession, as by union for defense against suits for malpractice, or the relief of physicians who have been specially unfortunate, or their families But this work, too, is taken up after the profession has been organized Such objects do not primarily bring about professional organization.

1 Maintenance of an Ethical Standard—The vital purpose that brings about organization that sustains and perfects it, is the determination to make the profession more efficient and valuable to the community, by the improvement and diffusion of knowledge among its members, and the maintenance of an ethical standard A little consideration should show why this is so The profession exists to render a certain service to the community In so far as it fulfils this service it is worthy of perpetuation and support If it should fail to render valuable service it ought to go out of existence and ultimately would do so Its value to the community, like the value of any other profession, depends on the fidelity with which its members serve the interests of their clients Between a man and his medical adviser the relation is this the patient agrees, explicitly or implicitly to pay the physician his fee the physician agrees to employ all his knowledge and skill for the benefit of the patient There can be no matching of knowledge of the market as between salesman and buyer There can be no use of conscious power on the one hand to drive an extortionate bargain with dire need on the other To apply the rules of conduct recognized as proper in ordinary commercial transactions to the relation of physician and patient is to destroy that relation Hence the peculiar need of professional organization to define maintain and enforce a standard of professional ethics

2 Diffusion of Medical Knowledge—Then medical organizations attempt to improve extend and diffuse professional knowledge It is the possession of certain knowledge and technical skill that justifies the recognition of a man or woman as entitled to membership in the medical profession Without the possession of such knowledge and skill, no well-informed person would for an instant regard him or her as a physician or surgeon Let us consider for an instant how this mass of professional knowledge and technical acquirement has come into existence It has been wholly through the communication of the new fact or method discovered by one member of the profession to his fellows Take all the original discoveries attributable to any one member of the medical profession, the most able, the most indefatigable, the most favorably situated, through the longest working life How utterly insignificant would these be as a basis for the practice of medicine, as compared with what each of us has learned from his predecessors and contemporaries in the profession Without the diffusion of medical knowledge no medical profession would or could exist

Consider how our appreciation of any medical truth is arrived at. Take the history of tuberculin Announced to the laity by one of the most acute observers of the age, after years of study and careful laboratory experiments Koch's discovery, for a time seemed to serve only to raise false hopes to increase suffering, to destroy life to bring contempt on scientific medicine But announced to the profession placed in the hands of a host of interested workers, there have already emerged certain facts that have made tuberculin a real benefit, and give promise through the general sifting and trying process to which the whole profession subjects the observations that are brought before it, of benefits to match our earlier hopes With an organized medical profession we possess an authoritative tribunal capable in the end of fixing the value of each proposed measure that is frankly brought before it

ENEMIES OF THE PROFESSION AND THE GROUNDS OF WARFARE

Our organized profession rests on the e two thin.. recognition of the supremacy of the interests of the patient and absolute frankness and honesty in statements of scientific fact The enemies of the organized medical profession, its essential enemies those whose opposition to it is radical and vital are those who would place other interests on a par with those of our patients, or who would practice or permit secrecy or untruth to be mixed inextricably with established scientific facts Between the medical profession and all interests or individuals who place themselves in the attitude of opposition to our vital principles there must always exist a struggle that can not end until secrecy [illegible] truth [illegible] deceptive practices until willingness to [illegible] of the

* Read before the Medical Society of the City and County of Denver Oct. 2 1906.

patient to other interests are swept away, or the medical profession itself is annihilated

Let us not underestimate the importance, the severity or the duration of this warfare On the one side the medical profession springs from the needs and the best impulses of humanity On the other side the opposition to it draws its vitality from selfishness, deeply rooted and universal as the life of our race The struggle commenced before we were born, it will go on when we are dead Our duty is to see that we understand the present phase of it, as well as we can, and give what little influence we have to the support of the right

PROPRIETARY MEDICINES, ETHICAL AND UNETHICAL.

The present phase of the subject deals with the question of proprietary medicines "Patent medicines" is the popular term for the class, but those to which the term "patent" strictly applies raise a relatively unimportant side issue The "patent" medicine may represent interests to some extent opposed to those of our patients, but a patent is only granted for a limited time and based on definite published statements If such statements are not true, their falsity can readily be demonstrated

In this country, at least, the important issue is with regard to preparations sold under a registered trade-mark We can have preparations sold under a copyrighted trade-mark that are strictly ethical But such preparations must conform to the following requirements their composition, or exact method of manufacture, and their physiologic and therapeutic action, must be generally known They must be sold under their ordinary pharmaceutical names which any person is privileged to use, so that all may understand what the medicine purports to be The trade-mark or copyrighted portion of the name must only indicate the responsible maker, thus becoming a guarantee of purity and quality

Squibb's ether is a type of such a preparation Ether is a drug, the composition, physiologic action, uses and dangers of which are well known False claims for such a drug would be promptly challenged and could not seriously mislead any one who took care to inform himself on the subject If the manufacturers of a particular brand of ether can produce one of greater purity, more free from irritants, they deserve the reward of superior skill, while the profession and the public can profit by the guarantee of a reliable name The same may be true of a particular brand of diphtheria antitoxin, if proven to be more perfectly aseptic or more efficient than that produced by a rival manufacturer

But a name can be copyrighted without any definite statements as to the chemical composition or method of preparation of the substance it represents When what is claimed to be a new chemical compound is put forth, with claims of therapeutic value, based not on the general experience of the profession, but on the alleged results attained by some anonymous or unknown experimenter, generally in the pay of the proprietors of the copyright, the act violates the fundamental principles of organized medicine It is an act of aggressive warfare on the part of an enemy of medical science, and as such must be regarded and met by every loyal member of our profession

Even though the composition of a new preparation be frankly stated, the copyrighting of the name by which it will be commonly known should be regarded with suspicion The physician who prescribes a substance by its copyrighted name places himself at the mercy of the proprietors of that name He must have full faith in their honesty and intention to put forth a valuable drug, the use of which shall be wholly subject to the discretion of physicians, but the copyrighted name is an asset that may pass, as it often has done to the hands of those who may vary the composition of the preparation, or the manner of placing it before the public Even aside from secrecy or misleading statements, when the physician prescribes acetanilid under the name antikamnia, ammonol or phenalgin, what possible benefit is the use of such name to the patient, who pays from 100 to 500 per cent more for the drug, or to the general public, or to any one except the proprietors of these copyrighted names, and those with whom they divide their profits?

IGNORANCE AND TREASON IN THE PROFESSION

In the past, even in high places, ignorance and indifference to this matter have been so common, the evil has grown so gradually to its present gigantic proportions, that individual members of our profession can not be greatly blamed for some mistakes in this direction But now that the issue has been raised by the American Medical Association, now that even the better lay magazines and newspapers have awakened to the enormity of the crime against the public of secret proprietary medicines, all members of our profession and all medical organizations are called on to take a positive stand with reference to this subject. There is need to arouse the professional conscience and also to inform the professional intelligence with regard to this subject.

The warning of Samuel Hopkins Adams[1] in his address before the Medical and Chirurgical Faculty of Maryland is too true

> You have not, as a profession, an intelligent idea of the forces which you are fighting You are fighting a very keen and powerful enemy in the "patent medicine" man, or rather you are just beginning to fight him, for you have let him take the aggressive thus far There is little about your profession that he does not know When he misrepresents you he does it shrewdly There is little about his profession that you do know

In the present confused situation the danger is not from open avowed enemies, but from ignorance and treason in our own ranks For ignorance there will soon be little excuse The facts that have been published by THE JOURNAL of the American Medical Association and some of the journals of our state medical societies are within the reach of all who have a proper interest in the subject For treason we may have to resort to sharper remedies than have yet seemed necessary Let us remember that the Constitution of the United States defines treason as consisting "in levying war against them, or in adhering to their enemies, giving them aid and comfort" No narrower definition could possibly be sufficient

Let us clear up this issue as much as we can Our enemies are the vendors of unethical proprietary medicines, secret or put forward with extravagant claims These men are engaged in getting out of the public all the money they can without coming in serious collision with the criminal law They have no professional traditions they have no special code of morality, they are engaged in a business in which the general morality taught in churches and schools is disregarded They have no interest in the establishment of scientific truth The proprietary medicine maker would not be satisfied with a true estimate of the action of the preparation he

1 Maryland Med Jour February 1906

puts before the public were it ten times more powerful and generally useful than any medicine yet known. The most nearly decent proprietor of such a preparation is spending a large part of his time and thought in exaggerating the virtues of his drug and minimizing its evil effects His aim is to build up an impression, manufactured out of hope and based on credulity, which will cause people to buy his wares

HOW THE PHYSICIAN IS MADE A CATSPAW

In accomplishing this aim he seeks the assistance of the medical profession, he studies the psychology of the medical man and employs such agencies as will best accomplish the object He sows free samples broadcast, calculating that one prescription from one physician will pay all the expenses of sampling ten He pays impecunious or renegade members of the profession for what purport to be scientific articles, making favorable mention of his drug But especially he buys the advertising pages of the medical journals, with the good-will of the editorial management thrown in, to keep his blatant unsupported claims and skilfully worded suggestions forever before the eyes of our profession

Thus are a multiplicity of worthless preparations, of false statements, and of distortions of facts brought to hinder the progress of scientific medicine even in the mind of the physician, and weaken his power to combat disease Thus do our enemies damage the healing art and steal the confidence the community reposes in the physician and use it as an important aid in the creation of the false impression, through which they hope to amass fortunes—the very livery of heaven to serve the devil

The time has come when the treason in our own ranks, which makes it possible and easy to use the reputation of medical men and medical journals against our profession and the interests of our patients, should be recognized and characterized in its true light The proprietary medicine manufacturers fight the medical profession in every state in the Union, with lobbyists in the hall of every legislature, and with clauses like these inserted in their contracts with the newspapers

1 It is agreed in case any law or laws are enacted, either state or national harmful to the interests of the ——— Manufacturing Company, that this contract may be canceled by them from date of such enactment, and the insertions paid for *pro rata* with the contract price

2 It is agreed that the ——— Manufacturing Company may cancel this contract *pro rata* in case advertisements are published in this paper in which their products are offered, with a view to substitution or other harmful motive, *also, in case any matter otherwise detrimental to the ——— Manufacturing Company's interests is permitted to appear in the reading columns or elsewhere in this paper*

On the other hand, these same manufacturers subsidize some of the largest so-called "independent" medical journals of the country to induce the more poorly trained, ignorant, lazy or careless portion of the medical profession to prescribe these nostrums, while the more venal lend their names and talents to give such use of these nostrums an air of respectability

Charity may well be exercised toward the shortcomings of individual physicians, but there is no excuse for medical organizations in any way favoring or condoning the efforts made to confuse medical fact with falsehood and bring about the disintegration of an organized profession Of course, the effort is persistently made to befog the issue There has been a great deal of hypocritical rejoicing in certain medical journals over the declaration of the American Medical Association at the Boston meeting that it was not opposed to 'independent medical journals" No one ever honestly supposed that it was The declaration simply met the false issue raised by those who give "aid and comfort to the enemies of the profession, when there was evidence of a disposition to oppose the treason which manages so-called 'independent medical journals' in the interests of nostrum makers

There is need on all occasions and on all sides for clear thinking and plain speaking in regard to this matter Let it be understood that it is treason to the traditions and ideals of our profession treason to scientific medicine and to medical organization, to give aid and comfort to our enemies by prescribing recommending associating one's name with, or advertising any proprietary remedy which is secret in composition or method of manufacture or for which extravagant, misleading or untruthful claims are made

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THE PLACE OF PATHOLOGY IN THE UNIVERSITY *

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It is a well-known historical fact that the origin of the natural sciences and in particular that of the biologic sciences is closely connected with the study of medicine Physics, chemistry, zoology and botany were not only first cultivated mainly by physicians and students of medicine but their special problems were also in the beginning largely the outgrowths of questions that plagued the minds of those who practiced the art of healing As time went on the sciences did not remain exclusively attached to medicine and the medical schools, but became associated with other branches of learning The history of education shows that universities, throughout their development have been almost continuously enriched with new subjects for study and scientific investigation derived from the activity of medical thought and practice Singularly enough the universities, and more strangely still the first born of the natural sciences have not always shown themselves hospitable to the biologic studies that have been developed more recently in medical surroundings Zoology and botany hold conspicuous and time honored places as branches of study worthy of the attention of the general university student while an unmistakable although it must be confessed feeble protest is being made even to day in some quarters against the admission of scientific anatomy and even physiology into the same category In one instance the classification of the biologic sciences into medical and non-medical has had the effect that the buildings that house comparative anatomy zoology botany and chemistry are separated by a considerable distance and by other barriers from the new and magnificent facilities for studying human anatomy physiology and pathology Apart from the essential identity of many of the biologic problems and putting on one side the question of the lessening of the opportunities for mutual intercourse among workers in related fields there is here involved the question of the exclusion of the general university student from participation in some of the most stimulating and momentous scientific movements of the day

Medicine on its side also has the less ment from the univer ity On the in the last few years zoology and

* President's Address Chicago Int

and theories have influenced fundamentally the trend of medical research. Who will undertake to say that the origin and growth of cancerous tissue is not essentially an embryologic or cytologic problem, and may not eventually be explained by the zoologist rather than by the professional pathologist? Any separation of the biologic sciences into medical and non-medical groups is not only artificial, but is open to the danger that either group may develop asymmetrically, imperfectly or abnormally when the restraining or stimulating influence of the neighboring science is withdrawn.

Pathology is one of the biologic sciences that has most recently swum into the ken of many professional educators, and the question will soon arise, if it has not already arisen, as to what justification exists for the introduction of such a subject into a university. At present the universities in the United States that foster a department of pathology or one of bacteriology and hygiene on the same academic footing with a department of Latin or of Sanskrit may almost be counted on the fingers of one hand. Out of forty of the leading colleges and universities only eight, according to statements in recent catalogs, give to their academic students an opportunity for studying bacteriology or pathology.

It may be said in the first place that any one acquainted with the subject matter of pathology understands that since it deals largely with physiologic, anatomic, and chemical data its pursuit must suppose sufficient and correlated facilities for the acquisition of the more fundamental branches. It would be a mistake to assume, however, that pathology is merely a form of the technical application of these sciences. Investigation into the nature and causes of disease carries with it as definite and as independent a body of problems as does the meaning of structure or the interpretation of normal function.

The advanced character of much of the work in pathology as determined by the extent of preliminary training necessary for effective approach and the special facilities essential for many kinds of pathologic work are likely for some time to come to limit the introduction of pathology into universities and at least to keep it in the category of elective rather than required subjects. This is not the time or the assembly for a full discussion of the respective provinces of required or elective studies, but it is natural that the courses in pathology in their broader aspects should be elective for the non-professional student although it may well be questioned whether some of the fundamental principles of bacteriology and hygiene are not deserving of consideration side by side with other courses in natural science of no greater educational value and of decidedly less practical significance for the average human life.

Taine says that the first great English utilitarian Francis Bacon at the age of 16 expressed dissatisfaction with Aristotle's philosophy, not that he thought meanly of the author, whom, on the contrary, he calls a great genius but because Aristotle's system seemed to him of no practical utility, incapable of producing works which might promote the well-being of men. However steadfastly it is held that the true university should stand as a bulwark against the ever aggressive forces of materialism and crude self-interest it is also possible to maintain that the large purpose of promoting the well-being of man is a vital part of its functions. Whatever may be said about the idealistic value of pathology there can be no question as to its importance in its broader utilitarian or humanitarian aspects. As a subject of scientific research pathology does not need to defend its place in the university. It both strives to extend the boundaries of knowledge and aims to promote individual and general happiness and welfare.

One of the points on which issue is joined is more subtle or, if you please, more academic than this. Should professional studies which are necessary for the special students of law, divinity, medicine, or engineering, be allowed to count toward a college degree? Are they, in other words, to rank on the same footing as courses adapted for training students to proficiency in Latin mathematics, or biology? The question of educational values and the relative merits of different branches of knowledge lies in the main outside the scope of this paper. I can not, however, help expressing my disagreement with the advocate of specialism who holds that special aptitude and concentration are the main things to be considered, and that every student should be allowed to work out his own salvation with his own talent in his own way. My observation indicates that few if any students are able to pick their way to advantage through the maze of studies in a modern university. Trivial, even mischievous reasons are allowed to sway the choice of courses and the result is in too many instances a jumble of brilliant misinformation. The principle of election of studies, in itself sound and worthy of extension, has been misapplied and misinterpreted until some have come to believe that the subject studied is of little moment, provided that a student feels or fancies that he feels a desire for it. From this view I cordially dissent. If the history and experience of the human race count for anything Choctaw is not so educationally valuable as Latin, or bookkeeping as plane geometry. A limit should be placed somewhere to the possibilities of election on the part of the college student. Subjects that may well find a place in a university devoted to the advancement of knowledge need not forthwith be made accessible to the whimsical choice of undergraduates. One of the notorious and still growing evils of the situation is the multiplication of what I may call intermediate courses which stand between the fundamental courses and the seminars or conferences intended for the guidance or promotion of research. Many of these courses are simply a concession to the feeling for symmetry and completeness, and their existence among college electives is educationally deplorable. Mr. Charles Francis Adams contends that a college education should be "purely a training of the mental powers—the suppling and development of the intellectual muscles—the proportioning of the faculties." He follows this with a definition of the educated man which in its blending of the older traditions with a very modern spirit is worth quoting. "An educated man is, I take it, one in whom the imaginative faculties, the reasoning faculties, and the observing faculties have all been properly and adequately developed—developed to such a degree that each becomes a usable tool for accomplishing the work in hand to do."

I believe that it should be the work of the colleges to turn out men so trained and equipped, and that to effect this end a much more scientific application of the principle of the election of studies is needed than has yet been made. This carries with it, too, a task which college authorities almost invariably shirk, a study of the individual student, of his needs and deficiencies as well as of his aptitudes and passing inclinations. A smaller number of courses announced and given, an adoption of

the principle of election within groups of studies and more attention to the individual as an individual are, it seems to me, some of the immediate objects to be aimed at in American college and university life

How, now, in view of these considerations, should we attempt to adjust the demands of professional education to the best interests of the undergraduate student? The question really resolves itself into determining what courses of a professional nature best serve the purposes of a true education, bearing in mind that the end in view is not the amassing of information, but the symmetrical training of the faculties Only those professional courses that distinctly serve this end should be thrown open for undergraduate selection From purely technical and informational courses they should be debarred until they enter definitely on their professional career It may even be questioned whether in strictly professional work the informational course does not play a far larger part than it should Mr Adams, in the address above quoted, says "The reasoning man, devoid of imagination and unable to observe, becomes, whether in religion, in politics, or in philosophy, notoriously a pitfall On the other hand, the observing man finds himself at fault unless he can imagine and reason No man, moreover is fit to be called educated unless in him each group of faculties has been suppled and trained" Every student of science, and especially every student and teacher of medicine may well consider whether, if he accept this view, many courses now recommended to or required of the prospective practitioner, investigator, or teacher could not readily and advantageously be dispensed with

In a university, therefore, the courses in pathology *ought to stand on their own educational merits* and be weighed like courses in Hebrew or on the political constitution of the Romans, not so much for their informational content as for their ability to train the powers of the mind Like other courses in natural sciences the fundamental or elementary courses in pathology and bacteriology possess, in my opinion a peculiar and unique value not possessed by courses in linguistics history, or economics Much is said nowadays concerning the introduction of the scientific method into these subjects, *it might even be semi-seriously urged that science* is not needed by the student of philology and economics since these branches have become infected with the scientific method One of my colleagues has recently said "There is certainly no fundamental distinction between the researches of the historian, the philologist, the social statistician and those of the biologist, the geologist or even the physicist and chemist in point of method" With this view I can't agree

It must not be forgotten that while certain features of the scientific method are applicable to subjects like history and philology, others are not and in the nature of the case never can be. The student of history can rarely if ever depend on his own first-hand observation but must rely more largely than the student of science on facts recorded by observers of doubtful capacity or even questionable veracity The original documents moreover that constitute the raw material of history are often so tinged with human passion as to be valueless as records of observed fact Furthermore the opportunities for experiment of which science makes so large a use are practically altogether wanting When complex economic phenomena are accurately observed and their nature correctly interpreted it may be possible to frame plausible generalizations but the verification of these generalizations is another matter There are different views as to whether the governmental ownership of railways in the United States is practicable or desirable, but none of these theories can be verified in a class-room nor can we make on a large scale a series of experiments, first in one direction then in another, while all other conditions remain the same

I am compelled to believe therefore that the scientific method in its entirety and cogency is best exemplified by courses in natural science The advantages such as they are, of personal observation and experiment followed by generalization and verification, may be presented by the fundamental courses in pathology and bacteriology, as well as by courses in other natural sciences In fact, something might be said in advocacy of bacteriologic method as calculated to enforce in a peculiarly direct way the necessity of uniformity of condition in experimental work but this is not essential to the present argument Granting that the elementary courses in pathology *therefore, stand on the same level educationally speaking* as the other branches of natural science, it must be added that in common with the rest of the biologic sciences they demand some preliminary scientific training for their successful approach

Although I am heartily of the opinion that training of the imagination, the reason, and the power of observation should be the main object of a college course there is no reason why a steady prosecution of this object should prevent one from gathering flowers by the wayside It seems possible to attain the end and at the same time to acquire information of a kind most likely to be useful to the average human being Here lies the opportunity for the group elective system which shall give some play *to aptitude and inclination at the same time that every* course is made to tell in the direction of mental efficiency and control The evaluation of the subject matter of a science is perhaps more a question of personal temperament than any yet touched on and I do not wish here to advance the claim that to any discerning intellect pathology stands supreme among the sciences I would simply point out first that the known and elementary facts regarding the nature and causes of disease are of importance and usually of interest to the individual and second that the diffusion of at least an elementary knowledge of these facts is essential to the well-being of every nation and community

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THE ADJUVANT ACTION OF QUININ HYDROCHLORATE IN INFECTIONS BY THE BACILLUS OF TETANUS

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Not long since my attention was directed to a case of tetanus of a very rapid and severe type which ended fatally It appeared to be a case of so-called idiopathic tetanus as no history of trauma of any kind was given On careful examination it was found that the patient had been threatened with an attack of malaria not long before the attack of tetanus and had been given a hypodermic injection of the hydrochlorate of quinin by the physician in charge The attack was evidently aborted as no other symptoms resembling those of tetanus developed This incident was very interesting to me as I had just read a report by which I had tried to corroborate

the hope of being more successful in the work of corroboration than I was in the first series of experiments, which were entirely negative, and in the light of the case of tetanus above mentioned, I undertook a second series of experiments As the question is not without practical interest to the physicians, I report results of two series of careful experiments following in detail the work of Professor Vincent

Professor Vincent's[1] report calls attention to the many cases of tetanus which have been reported as following the subcutaneous injection of quinin under supposedly aseptic precautions and gives the results of his experiments along these lines He states that the many cases on record can not be explained on the ground of poor surgical technic, such as the improper cleaning of the skin at the time of the hypodermic injection or to the uncleanliness of the syringe or needle, nor to the contamination of the solution of quinin He states also that quinin injected subcutaneously in experimental animals at the same time or following the injection of the spores of tetanus favors the development of the disease He thinks that the solutions of quinin show a marked favoring action with the spores of the tetanus bacilli and that the disease can result when hypodermic injections are made aseptically if the spores are present in the body This action is both local and general, he says, and results whether the quinin is injected at the same point as the spores or at points distant. It also results if the injections of quinin are made synchronous with, or at different times from that of the injection of the tetanus spores The bacilli develop not only at the point of inoculation but are encountered, Vincent says, in the liver, kidneys, spleen, ovaries and bone marrow[2] He claims also that when tetanus spores are injected on one side and quinin on the other, the locus of the infection is on the side on which the quinin is injected, the bacilli having passed across the body to this point

In my experiments I found that virulent tetanus spores preserved their vitality from 10 to 30 days in solutions of the five official salts of quinin, namely, the sulphate, bisulphate, hydrobromate, hydrochlorate and the salicylate[3] I found the hydrochlorate of quinin slightly more antiseptic than the other salts, but found also that it was not capable of destroying the spores of tetanus In concentrated solutions, however, it was capable of destroying the bacilli of tetanus

I then set about to determine the lethal dose of hydrochlorate of quinin for the experimental animals I found in a series of experiments that the amount varies from 1/3,500 to 1/4,000 the weight of the guinea-pig and from 1/4,500 to 1/5 000 the weight of the rabbit These figures varied with the age of the animals, young animals being more susceptible than older ones

In my experimental work I found it difficult to get a good spore-bearing culture of the bacillus of tetanus, but finally secured a virulent spore producer on which I could depend This culture would kill a normal guinea pig in from two to three days In the experimental work on the action of quinin I used a toxin-free culture of tetanus spores After a culture had been incubated for some time and began to form spores in large numbers it was heated to 80 C for three hours to destroy the toxin and used within a short time after heating

THE LOCAL INFLUENCE OF QUININ

From 1 to 2 cc of a heated culture of live tetanus spores together with a sterile 5 per cent. solution of the hydrochlorate of quinin corresponding to 1/5,000 of the body weight was injected into the flank of a guinea pig by means of a sterile hypodermic syringe Control animals of approximately the same age and weight were injected, one with an equal amount of the tetanus culture, the other with an equal amount of the solution of hydrochlorate of quinin The animals inoculated with the tetanus spores and quinin and those inoculated with the quinin alone showed a noticeable reaction in a few minutes but seemed almost normal in a short time This reaction, which showed itself as an increase in respiratory movements and paralysis of the inoculated limb, was undoubtedly due to the hydrochlorate of quinin.

In 50 per cent of the animals inoculated with tetanus spores alone the disease developed in from five to seven days In these animals the wound had ulcerated and cultures made from the locus of inoculation showed a mixed infection. In the other 50 per cent the bacteria could not be demonstrated at the point of injection and without doubt the reason for this was that the spores had undergone phagocytosis by the leucocytes or tissue cells or perhaps had passed to other portions of the body and had undergone a similar process In several cases sterile pus was demonstrated These were the results of a series of 10 experiments on guinea pigs

The amount of the solution of hydrochlorate was increased to 1/4,500 of the body weight and still no tetanus developed in those animals inoculated with quinin and tetanus spores provided there was no secondary infection Two animals which had been inoculated with hydrochlorate of quinin and tetanus spores died of tetanus but a secondary infection was easily demonstrated and the animals did not die in any extraordinary short time Vincent states that the animals inoculated with quinin and tetanus spores in the majority of his experiments developed symptoms of tetanus in three days and died in 24 to 48 hours after Some animals, one in five, he says, showed a high susceptibility and died in from 18 to 24 hours after inoculation, with convulsions and violent trembling The death in these cases was doubtless due almost entirely to the toxic action of the quinin hydrochlorate and not to the tetanus infection Solutions of quinin contaminated by other alkaloids give more pronounced toxic effects than pure quinin It is interesting to note that much of the quinin on the market contains other alkaloids

In experimenting to determine the lethal dose of the quinin I found that the animals usually died in convulsions and that these convulsions simulated those produced by the alkaloid strychnin or by the bacillus of tetanus Vincent states that in the above-mentioned cases the bacilli were easily demonstrated at the point of inoculation and also in the spleen, liver, kidney, etc I was not able to demonstrate this point

I believe that the hydrochlorate of quinin possesses both an antiseptic and weak disinfecting action on the bacilli of tetanus This is especially true of concentrated solutions of this salt. It is interesting to note that all fermentation and all putrefaction is stopped by the addition of this chlorin salt of quinin This action is probably due to the acid properties which it possesses Although chemically neutral it possesses acid properties

1 'Tetanos et Quinine Annales de l Institut Pasteur 1904 xviii, p 728.

2. The spores have been demonstrated in the fluids of the body in tetanus as it usually occurs by several observers recently They have never been demonstrated to be capable of multiplying however at other points than the locus of the initial lesion.

3. United States Pharmacopeia 1900

as do some of the other salts This is shown by the way they attach certain metals

In a little over an hour after injecting hydrochlorate of quinin and tetanus spores into the abdomen of a guinea-pig symptoms simulating those of tetanus were produced It is interesting to note, however, that those animals injected with hydrochlorate of quinin also showed the same symptoms The animals injected with tetanus spores alone did not die, the organisms probably having been destroyed by phagocytosis The tetanic symptoms were evidently not due to tetanus bacilli alone but principally to the toxic action of the quinin.

Taking for granted from previous experiments that hydrochlorate of quinin favors the development of tetanus, Vincent experimented to find out whether tetanus would result after the injection of the spores at one time and the injection of the solution of quinin some time after He concludes that the tetanic infection can be awakened by such procedure if the quinin is injected as long as eight days after the injection of the spores I tried the experiment without result as was expected from my previous observations

In his report Vincent discusses the character of the ulcer which is found at the point of inoculation He says that it is under the skin, slow to heal and covered by a yellowish-gray excretion In cases in which a mixed infection occurred after large injections of quinin I found that the ulcers were in the main similar The characteristic appearance is, perhaps, due in part to the coagulation of the proteids in the tissue by the hydrochlorate of quinin This power of coagulation is easily demonstrated on normal rabbit or guinea pig serum *in vitro* and such coagulation goes on in the tissues of the body to a limited extent. The leucoytes are claimed by some authors to be paralyzed by the action of the salts of quinin This point will be mentioned later

THE GENERAL INFLUENCE OF QUININ

Under this head Vincent discusses the general action of the hydrochlorate of quinin and claims that it causes an infection of tetanus when injected at points distant from the point of injection of the tetanus spores That is if a guinea pig is inoculated under the skin of one flank with a culture of tetanus spores and under the skin of the opposite flank a solution of hydrochlorate of quinin is injected at the same time or a few days later, within 24 hours tetanus occurs followed by rapid death Furthermore he states that the focus of the tetanic infection is not at the point where the spores have been injected but that they have passed across the body to the other side and located themselves at the point where the solution of quinin was injected There is no ulcer he states, at the point of inoculation of the spores and there are no bacilli, except, perhaps, a few in the broken down tissue According to Vincent, at the point where the quinin was injected the bacilli can be obtained in pure culture I found that after the aseptic injection of tetanus spores on one side of the guinea pigs and the aseptic injection of a sterile solution of hydrochlorate of quinin on the other the spores disappear at the point of inoculation, as Vincent says but I was not able to demonstrate them at the locus of quinin injection

Attention is called to the witherings of the extremities in some of Vincent's guinea pigs This is explained on the basis of the continuous multiplication of the bacilli It is possible to get this same atrophy in the extremities of guinea pigs by the injection of hydrochlorate of quinin in large doses when no tetanus spores are present.

Experiments were made to show, if possible, whether injections of hydrochlorate of quinin under skin and tetanus spores by the alimentary tract and *vice versa* would cause an infection These results were entirely negative

Next I made observations to determine the action of hydrochlorate of quinin on the leucocytes I found, like Vincent, that the quinin solution possesses some corrosive action on the leucocytes when applied to them in a fresh condition A slight paralyzing effect is shown which is, obviously less marked with dilute solutions Some of the other salts, particularly the hydrobromate, have a similar effect in concentrated solutions I was not able to demonstrate a marked hyperleucocytosis in the experimental animals, although there was a slight increase in the number of leucocytes The action of quinin on the leucocytes, etc, has been investigated by several men, most notably by Binz

SUMMARY AND CONCLUSIONS

1 Solutions of the official salts of quinin have a feebly antiseptic action on the spores of tetanus, the hydrochlorate being the most antiseptic. Obviously the antiseptic action depends on the concentration of the solution Saturated solutions do not disinfect

2 The lethal dose of neutral hydrochlorate of quinin is from 1/3,500 to 1/4,000 the weight of the guinea pig and from 1/4,500 to 1/5,000 the weight of the rabbit The dose varies with the age of the animal, young animals being more susceptible than older ones

3 Hydrochlorate of quinin has the power of causing a paralysis which persists for various lengths of time in the experimental animals This action is due, I think, to its coagulating action on the protoplasm of the peripheral nerves Atrophy of the extremities results after large doses

4 In cases of tetanus in experimental animals, which have been injected with hydrochlorate of quinin, the disease resulted only in those cases in which there was a mixed infection The quinin may have acted indirectly since its corrosive action at the point of inoculation would make secondary infection more liable It is possible that the quinin may act as an additional irritant to the nervous system in cases of tetanus or may bring about such changes in the protoplasm of the nerve cells and fibers that they are more easily acted on by the tetanus toxin than normally In these particulars however any mild corrosive substance would serve the same purpose

5 In cases in which tetanus does not result after injections and there is no secondary infection, the spores have evidently undergone phagocytosis by the leucocytes or tissue cells as none of them are ever found

6 Hydrochlorate of quinin has not the power of favoring an infection of tetanus except in the indirect manner mentioned in paragraph 4 It has not the power of awakening an infection when injected at the same time or at other times than that at which the tetanus spores are injected

7 Hydrochlorate of quinin produces a slight leucocytosis and slight paralyzing effect on the leucocytes Should this paralysis be so extensive as to involve the majority of the leucocytes in the body it is possible that the spores of tetanus might develop unhindered as in the case when lactic acid is injected If [illegible] strength was injected in su

act on the majority of the leucocytes the toxic effects of the quinin would be evident at once and death of the animal would probably result.

I think, without doubt, that the majority of cases in which tetanus has resulted after hypodermic injections of quinin can be traced to some fault in the surgical technic or to the contamination of the solution of quinin. Quinin possesses a corrosive action and the necrosis of tissue resulting in some cases would undoubtedly favor an infection by the bacillus of tetanus as well as by other bacteria. As to the statement that the transference of the spores of tetanus takes place from point to point according to where the quinin is injected, I do not think that there is at present sufficient proof. Nor do I think it possible for the healthy live spores of tetanus to be present in the body and to develop a severe and fatal infection on the advent of an injection of hydrochlorate of quinin.

In THE JOURNAL of the American Medical Association, Dec. 9, 1905, I published an inquiry asking if any practitioner had ever seen a case of tetanus resulting from a hypodermic of quinin. A few answers were received from various physicians but no cases reported were exactly in point. In one case there was good evidence of poor surgical technic in the sterilization of the syringe and the skin. In another case tetanus is reported as following the injection of aromatic sulphuric acid and quinin sulphate. No cases were reported in which the hydrochlorate was used and tetanus resulted except the one referred to above as giving evidence of poor technic and in this case there was evidence of several other slight abrasions on the patient which might have served as avenues of infection.

Evidently in this country tetanus does not result after hypodermic injections of quinin, although it is possible it may in other countries.

CEREBRAL SYPHILIS IN CHILDHOOD

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(*Concluded from page 866*)

CASE 31.—Boy, 9 months. Father syphilitic.[26]

Fever and general convulsions repeated at interval of few days, with blindness between attacks. Great restlessness. In 2 months complete blindness from beginning optic atrophy. Specific treatment was followed in few weeks by returning sight and in 11 months complete cure.

CASE 32.—Girl 12 years. Father syphilitic.[27]

Well to fourth year, then apoplectic attack with right hemiplegia, including face and loss of speech, passing off in eight weeks, leaving some weakness of arm. In sixth year diminution of sight, weakness in legs, ataxia in arms and legs, especially in gait. Seventh to eleventh year learned well at school but finally completely blind. Twelfth year frequent vomiting followed by intense headaches. Attacks of vertigo. Three months later, epileptiform convulsions. Falls, unconscious, tonic spasm of entire body, incontinence of urine, followed by sleep, recurring every one to two weeks. Severe vertigo. Three months later deaf.

Pupils dilated and fixed. Constant nystagmus. Percussion and passive movement of head painful. Ophthalmoscope showed high degree of optic atrophy. Its neuritic origin still evident on the left. During the next few weeks convulsions continued and right facial paresis occurred, with three days later deep unconsciousness with varying pupils and slow pulse and ending in tonic rigidity, succeeded by similar attack. Thence great variation in mental state, somnolence, brightness, happiness, irritability, docility, succeeding or alternating with one another. Very frequent convulsions. Following three such in one forenoon, ensued right facial paralysis with eyes turned to right, irregular pulse, fretfulness, all clearing in a few hours, leaving no trace.

Headache, vertigo, vomiting and often pains when head is moved (at such times buries it deep in pillow) continued. One night after going to bed in good spirits she became restless, complained of headache, cried much and about midnight had two severe convulsions from which she did not recover consciousness.

Postmortem.—Extreme new growth of gummatous character, more marked at the base, where it had injured all the adjacent parts of the brain and the cerebellum as well as the nerves. Gummatous encephalo-meningitis. Interval hydrocephalus. Gummatous leptomeningitis of cord with marked involvement of vessels and invasion of white substance stance.

Had this patient been seen only at the time of the paralysis, at the fourth year, her case would have been regarded as an ordinary infantile hemiplegia. By far the most common form of specific cerebral palsy in children is hemiplegia. Many of these cases, as is the case with epilepsy and with mental defects, if not associated with other symptoms and if of fixed character, can not be differentiated from hemiplegia of other origin, except by the personal or the family history, or by the results of treatment. Often, however, the instability of the condition, or its unexpectedly rapid disappearance, and perhaps repeated occurrence, distinguish it from the usual well-known type of unilateral paralysis. Any form of cerebral palsy may, however, occur.

CASE 33.—Child, 5 years. Parents syphilitic.[28]

Mother manifested symptoms three or four months after marriage. Child born three years later, the second child. The first, born at term after mother had been treated with potassium iodid, had a cutaneous ulceration which cleared on administration of potassium iodid. Patient well until fifth year when it fell a distance of less than two feet. Two days later paresis of left leg, and next day, also of left arm and face appeared. After three weeks inunction, four weeks after onset, all signs had disappeared. Three weeks later numerous moist papular excoriations appeared in folds of skin of lower extremities.

CASE 34.—Girl, 4 years. Parents and child syphilitic.[29]

First and second pregnancies aborted. Third, patient. Fourth had specific symptoms in infancy. Patient in fourth week had syphilitic eruption on palms of hands and soles of feet. Frequent subsequent relapses. Following one such, at 2½ years, paralysis of left extremities and face appeared, disappearing completely in a few days. When four years old a left hemiplegia again occurred, this time with loss of consciousness and preceded by some twitching of left arm. Two days later vomiting, convulsions and fever, incontinence of urine and feces. In three weeks loss of speech and inability to understand what was said to her. In four weeks this improved, so that she knew her mother but could not speak. Gradual contractions in arm and to less extent in leg ensued and shaking of head in this direction and that, and needless striking movements of right arm in air became noticeable. Death from diphtheria.

Postmortem.—Thickening of the pia-arachnoid, typical syphilitic disease of the basal arteries, numerous foci of softening in the hemisphere, alternating with sclerotic areas, loss of ganglion cells in the brain and degeneration of fibers in the cord.

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26. Karth: 'Syphilis Cérébrale Héréditaire,' Rev. mens. des Maladies de l'Enfance, 1888, p. 338.
27. Siemerling: 'Zur Lehre von der congenitalen Hirn- und Rückenmarkssyphilis,' Arch. f. Psychiatrie, 1888-89, p. 102.
28. Marfan: "Hémiplegie chez une enfant hérédo-syphilitique âgée de cinq mois," Annal. de Dermat. et de Syph., 1887, p. 540.
29. Ziegler and Nauwerck: Beitrag zur hereditären Syphilis des Centralnervensystems, also Beiträge zur allgemeinen Pathologie und pathologischen Anatomie, 1888, iii, No. 4, p. 387.

CASE 35.—Girl, 10¾ years. Coryza in fourth week.[29] Sat up first at three and walked at four years. In third year general convulsions with coma, and again in fourth year. At six years suddenly fell while walking, with loss of power on the right side and thick, indistinct speech. No loss of consciousness or spasm. Three weeks later able to walk again. Slight paralysis on right side. Left pupil larger than right. No ptosis or strabismus. No facial palsy. Incisors notched, mentality low, absence of sight on left, retinochoroiditis. Hearing, good. Death in eleventh year from nephritis.

Postmortem.—Leptomeningitis chronica atrophy of the left hemisphere marked, less of right. Sclerosis of cortex and disappearance of ganglion cells with increase of neuroglia. Disease of the middle meningeal arteries with infiltration by gelatinous nodules.

The following two cases in one family with marked family history are of great interest.

CASES 36 AND 37.—Boys, 9 years, 7 years.[30]

Father syphilitic a year before marriage. First child still born, second, dead in convulsions at third month, third, patient nine years old, fourth, lived only a day, fifth, patient, seven years old, sixth, seventh and eighth children up to time of history, healthy.

Patient, nine years. Healthy at birth, no signs in infancy, except that from the sixth week up to the sixth year bilateral convulsions occurred. In his eighth year he is said to have had "meningitis," for six months, very ill, severe pains in head, temporary squint, general loss of muscular strength. Gradual recovery of general power but hemiplegia of left side remained. In the ninth year, in the extremities, this remained complete, with rigidity, in face only partial. Traces of old optic neuritis both sides. Upper incisors defective. Right pupil larger than left. Mercury without effect. Intelligence good and reads well.

Patient, 7 years. In infancy jaundice, snuffles and moist sores about mouth and anus, yielding to specific treatment, and ulcers on nates, lasting 12 months. Never walked or talked well. Could learn nothing at school. In seventh year severe head pains began, with vomiting attacks and loss of bladder control, became clumsy in walking, with irregular purposeless movements and frequent falls, with indistinct speech and could only partially feed himself. Ophthalmoscopic examination negative. Increasing vomiting and headache. Death in eleventh year from unknown cause.

A typical instance of recurrent hemiplegia, with transient initial and subsequent more permanent attack is the following reported by Heubner and well illustrates that absence of history is of little or no negative value.

CASE 38.—Boy, 2½ years. No history.[31]

Born with saddle nose. Weak in infancy and had many ulcers. Slow backward development. When 1½ years old had "shock" with sudden hemiplegia, lasting, however, but three days. No further nervous disturbance until two years four months old when he had severe epileptiform convulsions. After eight days of such convulsions a second right sided paralysis appeared, of permanent spastic type. A state of pallor, emaciation, anorexia, indifference to surroundings ensued. Glands including epitrochlears, enlarged. Slight ptosis. Congenital syphilitic retinitis. Paralysis involved face, the right side of palate and larynx.

Diagnosis Intra Vitam.—Infantile cerebral paralysis caused by encephalitis of cortex and of probable specific character on basis of fundus examination and the presence of peripheral unilateral paralysis of the glottis, because this defect otherwise so rare in childhood may occur in hereditary syphilis.[32] Death from measles at 2¼ years.

Postmortem.—Chronic leptomeningitis of cortex with adhesion especially over left hemisphere, areas of softening in cortex, atrophy of convolutions of lateral region of left hemisphere with extensive loss of gray substance. Extreme syphilitic endarteritis of basal arteries and their branches.

In Cases 34, 37 and 43 and in the two following will be seen cases associated with involuntary movements. These may be of athetoid or of choreiform character or tremor may occur. At the time of occurrence they may or may not be associated with impairment of muscular power. The following very interesting case shows an alternation between the two phenomena.

CASE 39.—Girl, 7 years. Child syphilitic.[33]

She was attacked by a right hemichorea which cleared on specific treatment. Few months later after a fall on forehead, intense pain and paresis of left arm and face and later the leg, which also improved on specific treatment, but was followed by a recurrence of the hemichorea as before on the right and this again disappeared. Death later in coma and convulsions. No postmortem.

This was probably a case of specific arteritis, the phenomena being due to circulatory disturbances and the final death to extensive arterial occlusion or thrombosis.

CASE 40.—Boy, 10 years.[34]

Fourth year, headache, fever and paresis of left side, including lower facial and slightly lessened sensibility in arm only. Left pupil larger than right. Under potassium iodid all vanished except the pupillary condition. In both hands constant spreading and extending of fingers developed more on right side. Developed well mentally and physically. In his ninth year a double keratitis appeared. In tenth year icterus, stupor, unconsciousness and death all in two weeks.

Postmortem.—Extensive chronic leptomeningitis with adhesions to brain. In gray and white matter numberless gray indurated areas, in size from a hemp seed to hazel nut, the largest being in the third right frontal convolution, immediately in front of the Sylvian fissure and another large one just external to the lenticular nucleus. Hepatitis.

Cases of feebleness of mind or idiocy in which the family or personal history, or stigmata in the patients themselves, are so evident of syphilitic infection as to suggest strongly, almost unequivocally, a causal relation between the infection and the intellectual defect are very numerous. The many cases reported by Judson Bury,[35] Shuttleworth,[36] Beach,[37] Forbes[38] and Fournier[39] (Page 473) may be referred to. No matter how strongly our suspicion of the specific nature of congenital feebleness of intellect may be, we can not declare it with absolute certainty even when the family infection is extremely evident, for even at postmortem these cases may show only atrophy, sclerosis, or cyst formation not differing from that produced by other causes.

If, however, the mental enfeeblement ensues after birth and after a certain degree of intellectual development has been reached the clinical symptoms are often of so pronounced a character and peculiar course as to give evidence of diffuse and multiple lesions in the brain not to be accounted for by simple non-development or by atrophy following meningeal hemorrhage or merely circumscribed arterial accidents. At this time in short, the process is active and the changes peculiar to a specific cerebral process are present. Postmortem examination

[29] Gee. "Inherited Syphilis. Sclerosis of Encephalon." St. Bartholomew's Hosp. Rep. 1880, p. 37.

[30] Warner. "Cerebral Syphilis." Brit. Med. Jour., 1888, II, p. 707.

[31] Heubner. "Endarteritis syphilitica bei einem 2½ jährigen Kinde." Charité Annal., 1902, p. 126.

[32] Heubner. "Syphilis im Kindesalter." Gerhardt's Handb. d. Kinderhlk., 1896, p. 58.

[33] Allen. "Some Cases of Syphilitic Chorea." Presented to Jahrb. f. Kinderhlk., 1877, xii, p. 201.

[34] Jacobson. "Et Tilfælde af Hjerneaffektion hos en 10 Aars Dreng med Formentlig Hereditær Syphilis." Hosp. Tid., 1894, 4, R., II, 17.

[35] Judson Bury. "The Influence of Hereditary Syphilis in the Production of Idiocy and Dementia." Brain, 1894, p. 44.

[36] Shuttleworth. "Idiocy and Imbecility in its Relation to Syphilis." Am. Jour. Insanity, 1895, p. 58.

[37] Beach. "Cases of Idiocy and Imbecility Associated with Syphilis." Am. Jour. of Insanity, 1895, p. [illegible].

[38] Forbes. "The Influence of Hereditary Syphilis in the Production of Mental Defect." Scottish Medical and Surgical Journal, 1895, p. [illegible].

tion of these cases confirms suspicion aroused by the clinical symptoms

On the other hand, when these children live on to a point where active symptoms have long ceased and complete imbecility has existed for some years, postmortem changes in the brain may resemble those found in cases imbecile from birth By analogy it may be assumed that many of these latter are brought to their condition by earlier syphilitic disease, possibly *ante partum,* which has ceased or burned itself out, leaving a scarred and defective brain

Those cases of mental impairment that begin later may have their starting point at any time up to the end of childhood When the commencement is in a child who has attained a considerable psychical level, the case assumes not infrequently all the clinical characteristics of progressive dementia and general paralysis and becomes then an instance of dementia præcox. Whatever other factors may be potent in the etiology of this affection in certain instances there can be no question of the direct and evident syphilitic nature of many of these cases

CASE 41.—Girl, 14 years[39]

Mother had brown spots all over her body in the eighth month of her first pregnancy, which ended in still birth, second child, imbecile, died at 4½ years, third, patient, fourth, died in convulsions in sixth week, fifth, had coryza in infancy, 11 years, living Of remaining five children, three died in infancy

The patient had coryza and was covered with "spots" in infancy Then developed well physically and mentally up to her 10th year, when mind began to fail Began to sit still and take no notice of things and spoke only when spoken to and then only of things that occurred long ago Thirteenth year, walking difficult, incontinence at times Irritable and easily frightened Can only name a few simple objects and does not know how many fingers she has until she counts them Knee jerks increased Well marked, disseminated choroiditis

CASE 42.—Boy, 10 years Father syphilitic[40]

In infancy coryza and sores on nates Grew up strong and learned fairly well and was bright until after his sixth year when he began to have some difficulty with gait, complained of headache and was irritable. Then progressive mental impairment and was sent to asylum shortly before ninth year Death at 10 years

Postmortem.—Chronic diffuse meningitis

Warner mentions a boy who showed gradual mental deterioration for three years, thence a stationary condition His brother had infantile hemiplegia with subsequent athetosis Specific history

The following case with a course of 15 years from onset of the first cerebral sign to death is typical of this phase of cerebral syphilis, and may serve as an example of many others which can not be given in detail within the limits of this paper

CASE 43.—Girl, third to eighteenth year No family history[41]

In second month skin eruption and began to emaciate, in seventh month an eruption on back, hands and feet and ulceration about anus Mother was then discovered to be in secondary stage of syphilis which began in the pregnancy with this girl Following the use of calomel the child became apparently well, grew and walked at 1¼ years In third year sudden squint, eye turned out and right pupil dilated Seventh year went to school and made good progress In good general condition and with only occasional slight inflammation of eyes, went on to her ninth year when mental advance ceased Her love of order and cleanliness and her docility ceased Punishment made her worse

Eleventh year Convulsive tremulous movements in the muscles (treated for chorea) These ceased after some months, but she remained at the point attained intellectually in her ninth year Her temper became more and more irritable but she was able to be confirmed in her 15th year Menses which began at 12 years ceased in this year Now, in addition to the progressing mental failure, came attacks of mania with delirium and hallucinations, she heard voices telling her she was going to be whipped. At times refused food, cut her dresses and cried aloud, "I am crazy, I am crazy" Soon after, a state of complete imbecility ensued Would sit or stand in one place for hours taking no notice of anything about her, answering, if spoken to, by disconnected words, or inarticulate noises Death in convulsions, chiefly right sided and in extreme emaciation, at 18 years

Postmortem.—Exostosis of inner table near foramen magnum Extreme chronic leptomeningitis Left lateral ventricle greatly dilated. Ependymitis granular Right lateral ventricle also dilated.

In this case we see the early premonitory symptoms, which in this instance happened to be cranial nerve disturbance, which, as mentioned in the beginning of this paper, may be among the early warnings of the approaching storm, occurring six years in advance of the apparent onset of intellectual failure. Here, however, probably insidious changes in character or intellect were overlooked by the parents, in the period between the third and the ninth year We see here also the absolute worthlessness of a negative family history, as far as statements made by parents are concerned This is illustrated in a number of instances among the cases studied In a case of Barthelemy's, cited by Fournier[1] (Page 508), specific history was denied until on forced questioning of the mother she admitted deception and stated that she had been infected before marriage and "cured" in a few months Case 24 illustrates well the necessity of examining the other members of the family in every case with negative history

If delay in instituting treatment is to be dependent on the awaiting of definite or reliable statements from the parents, the unfortunate consequences to innocent lives may easily be imagined, when we have to do with an affection in which only the earliest therapeutic intervention can be relied on to effect complete restitution Many of these cases of progressing dementia in children are associated with convulsive phenomena, either as initial or as intercurrent manifestations They are usually, however, subordinate to the predominating psychical changes

CASE 44.—Reported by Fournier (page 463)

Boy, 7¼ years Parents, syphilitic, child, syphilitic, was thought cured Developed well physically and mentally Suddenly fell unconscious in convulsions, twice repeated in same week Was claimed to be in good health but close questioning showed that for three weeks had complained of headache at times, vertigo, photophobia and tinnitus, and governess said he had been for several months inattentive, forgetful, working against his will, forgetting what he had learned at times seemed confused in mind, not answering questions, etc.

The prevailing feature of these cases is cessation of mental advance or advancing mental enfeeblement with alteration in the psychical nature, not infrequently with hallucinations, occasionally with mania, but almost never with delusions of exalted type at least during the period of childhood, previous to the fifteenth year

The following instance shows how wide a range of clinical pneumonia is possible in this affection

40 Warner and Beach A Case of Chronic Meningitis Probably Syphilitic and Causing Progressive Dementia Brit. Med. Jour., 1887 1 p 935

41 Mendel "Ueber hereditärer Syphilis in ihrer Einwirkung auf die Entwickelung von Geisteskrankheiten Arch f. Psychiatrie 1868 9 p 308

CASE 45.—Reported by Fournier[1] (page 473)

Girl, 10 years. Parents and child syphilitic. Father neglected treatment. Mother died of probable cerebral syphilis, had also neglected treatment as soon as primary lesions disappeared. First child, still birth, second, syphilitic child, dead at six weeks, third, patient. Specific signs in third year, clearing with treatment. Good development physically and mentally up to ninth year, "a bright, intelligent, interesting child of cheerful disposition."

In ninth year nocturnal enuresis appeared. Later severe sudden convulsions with unconsciousness, frothing at mouth and biting tongue at irregular intervals. Slight change of character and mental enfeeblement for next six months, then rapid deterioration, lost all she learned at school. Then embarrassment in speech, bad pronouncing, clipped words. Enfeeblement in vision and hearing. Delay in sensory perception of pain. Inequality of pupils. Vomiting attacks. Diminution of muscular power, indecision and awkwardness, dropping objects. Frequent intermittent contraction of certain muscle groups, especially jaw. Tremor in extremities and twitching of same. Paralysis of sixth pair, squint and diplopia. Incontinence of urine and feces. Progressive course. Treatment, instituted late, without avail. Complete imbecility and paralysis. For some weeks before death life was merely automatic, ending in coma.

Postmortem.—Foci of thinning and thickening of skull. Diffuse pachymeningitis and leptomeningitis with adhesions. High degree of softening of gray matter, nearly lacking in places, foci of softening in white substance.

Surely in all medicine there can be no more pathetic instance of innocent suffering than this case illustrates.

Three cases of early progressive dementia in one family are reported by Homen.[42] One of these patients had had slight attacks of faintness or vertigo, pallor and turning of eyes about once a month from the age of 3 years, then ceased at 8 years. In twelfth year attacks of headaches, vertigo and pains in arms and legs. General feeling of weakness and gradual mental deterioration, ending in complete dementia and paralysis, bedridden in 3 to 4 years. Pupils were dilated and sluggish. Syphilis was denied by the father. Mother's first pregnancy aborted, the second, fourth and fifth children were the patients, the third, eighth, ninth, tenth and eleventh all died in infancy, the sixth, seventh and twelfth were apparently well. Postmortem showed cerebral disease to be syphilitic arteritis.

These cases show how necessary it is to make a microscopic examination of the arteries of the brain before pronouncing them free from change. Extensive gross changes of the larger arteries of the body were to be seen microscopically, but the lesions of the cerebral vessels were only found, in this instance, by microscopic examination.

This was so in a case of Ashby's[43] in which the large basal arteries appeared normal, but extensive disease in the small vessels supplying the cortex existed. This was also the fact in Case 10 in which vessels that appeared normal were microscopically found to be affected. Heubner[44] also calls attention to this fact.

The ocular phenomena are a prominent feature of cerebral specific disease in children and are of great diagnostic value because they are so often early phenomena. This is especially true of changes in the pupils, inequality, sluggish reaction or complete fixation which may be present early in the disease. Choroiditis and optic atrophy may occur very early, especially the former. Keratitis is usually somewhat later in its development, but of extreme value in the diagnosis. It may be, in fact, the determining clinical factor in the diagnosis of a symptom-complex previously obscure.

CASE 46.—Girl, 8 years.[45]

Mother had syphilitic stricture of rectum, non-reacting pupils, vertiginous attacks, two miscarriages, two other children died in infancy. Patient born with specific rash. Fifth year, mental retrogression, sixth year, inflammation of eyes, seventh year, widely dilated pupils, rigid to light, left larger than right, in eighth year no reaction to accom. Double optic atrophy. Retinochoroiditis. Progressive dementia.

CASE 47.—Boy, 6 years.[45]

Father syphilitic eight years previous to boy's birth, mother had three miscarriages, two other children died in infancy, patient premature, mental advance ceased in fourth year. For hours sits alone and still, then restless, grasping at everything or repeating all he hears. Double opacity with nearly complete adhesion of iris on right, partial on left where pupil is widened and without light reaction. Retinochoroiditis.

In 25 cases of acute infantile hemiplegia, Haddon found a history of syphilis in the family or signs of the disease in 15 instances, or 52 per cent.

CASE 48.—Child, 9 years.[46]

Ulcer palate, caries of nasal bones, iritis, keratitis. Had been taking mercury six months when epileptic attacks occurred. Six months later notwithstanding continued treatment hemiplegia supervened with subsequent progressive dementia.

CASE 49.—Child, 10 years.[46]

Hemiplegia when one year nine months old. Interstitial keratitis and extensive choroidal atrophy.

CASE 50.—Child, 2 years.[46]

Father under treatment for syphilis before birth of patient. Child had snuffles and rash in early months. Progressive mental deficiency and slowly increasing rigidity in all extremities.

Postmortem.—Marked sclerosis of the convolutions.

The frequency with which specific meningitis is limited to, or concentrated at the base makes it probable that cases of "basal meningitis" may be of specific origin more often than hitherto supposed. Holt[47] mentions such an instance. Haddon believes also that it is not so very infrequent.

The not infrequent discovery of hydrocephalus in the postmortem examination of cases in which well-marked syphilitic cerebral disease is found, as in Cases 13, 16, 32 and 43, of those here cited and in several of the series not mentioned in this paper, the occurrence of well-defined clinical evidence of hydrocephalus in the subjects of cerebral syphilis that do not come to autopsy, the coincidence of hydrocephalus among the brothers or sisters of cerebral syphilitic patients, the presence of specific lesions, or the history of such in the patient or in the brothers, sisters or parents, all strongly suggest some causal relation between the hydrocephalic condition and the specific taint. Moreover the very frequent occurrence of several miscarriages, still-births and early infant mortality in the families in which hydrocephalic children appear, tends to confirm the evidence that syphilis is not infrequently an important and direct factor in the etiology. Thus of 15 families in which 145 pregnancies occurred, 5 per cent. resulted in still-

42 Homén. Eine eigenthümliche bei drei Geschwistern auftretende typischen Krankheit unter der Form einer progressiven Dementia in Verbindung mit ausgedehnten Gefässveränderungen (wohl Lues hereditaria tarda). Arch. f. Psychiatrie, 1890, p. 191.

43 Ashby. Brit. Med. Jour., 1898, p. 1170.

44 Heubner. Die luetische Erkrankungen der Hirnarterien. Leipsig, 1874, and Ziems en's Encyclopedia, xii, p. 711.

45 Kahlbaum. Ueber infantile Tabes und ihr Verhältniss zu Erkrankungen des Centralnervensystems. Arch. f. Psychiatrie, 1897, p. [illegible].

46 Haddon. "Congenital Syphilis in Children." Brit. Med. [illegible].

47 Holt. Diseases of [illegible].

births, 10 per cent in miscarriages, 16 per cent. died in early infancy, and 32 per cent were hydrocephalic

In a case reported by Mendel[41] of a hydrocephalic child that died at 6 months, out of a family of eleven children not one survived, only one living to the age of a year, dying then of convulsions, the remainder dying within the first three months of their existence in convulsions or with choleraic symptoms The father had had syphilis In a case cited by Engelberg[48] of 14 children by a syphilitic father 9 died in infancy, one of hydrocephalus Barensprung[49] reports many postmortem examinations of hydrocephalic children of syphilitic parents

What is it that induces in one case the concentration of the effect of the specific poison on the brain while another individual enjoys complete immunity from any cerebral implication? This is a problem to which no complete solution is at present possible Interesting, however, in this connection are a number of cases in which the apparent initial phenomena have followed a blow or fall on the head They are not so common that we may refuse to believe them more than coincidences, occurrences brought into the picture by the common tendency of the parent to attribute everything to an accident Nevertheless they can not be entirely ignored It may be that, in the one case, the brain by inherited or by acquired deficiency in vitality or in power of defense, becomes a *locus minoris resistentiæ*, while, in another instance, concussion by its circulatory and nutritive disturbances produces a similar condition In several cases of the series on which this study is based, blows or falls on the head preceded the onset of the cerebral disease It was noted also, among others, by Lallemand's[50] case, by Rul Ogez[50] and by Heubner[51] in adults Physical strain may be perhaps also occasionally a factor

Virchow also noted the influence of external accidents on the localization of syphilis, and Heubner remarks that "if this is true of the skin, bones, etc, it may be assumed for the nervous system," and quotes Paracelsus to the effect that "syphilis takes, in every man, the character of that disease to which he is inclined by hereditary or other predisposition"

DISCUSSION

DR W P NORTHRUP, New York City, said that any one who has lived within the boundaries of a foundling hospital of a metropolitan district for 12 years knows how many such cases there are

DR WILLIAM J BUTLER, Chicago, said that if recent articles on this subject serve to stimulate investigation and the reporting of bona fide cases, he is sure that cerebral syphilis will be found to occupy relatively quite as important a place in the pathology of brain lesions in children as it does in the adult Its clinical manifestations form a picture that permits of as logical a diagnosis as it does at a later period of life. As Dr Fairbanks pointed out, it may present itself clinically as an epilepsy, as a meningitis, with all the bizarre accompaniments of the specific basilar meningitis of the adult, as a cerebral palsy, with an onset and course reflecting in a convincing manner its specific etiology, as a progressive dementia with mental impairment, anarthria and focal paresis, and sometimes rigid pupils, as in a case he recently reported, leaving no doubt as to its cause In the cerebral syphilis of children one usually finds some other evidence of hereditary syphilis, as an atrophic choroiditis, deafness, Hutchinson's teeth, etc., but the absence of these should not in any instance dissuade one from a diagnosis any more than it would in the adult when we are not accustomed to depend on the statement of the patient nor the absence of external evidence of recent or old syphilitic lesions And it is exactly in those cases in which the early manifestations were slight or went unobserved that the cerebral changes may develop in children Its early recognition is of paramount importance from a prognostic standpoint, as the latter will of necessity depend chiefly on the promptness with which treatment is instituted.

48 Engelberg 'Behrend s Syphilidologie,' III 1862 p 37 etc.
49 Bärensprung Die hereditäre Syphilis Berlin 1864
50 Heubner Ziemssen s Encyclopedia xii, p 301
51 Ueber die Hirnerkrankungen der Syphilitischen. Archiv für Heilkunde xi 1870 obs 47

SOME IMPORTANT CONSIDERATIONS IN THE EXTRACTION OF CATARACT *

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Established methods of cataract extraction will be discussed in this paper only sufficiently to draw attention to certain of their important points and to compare them with those which I advocate Soft or membranous cataracts or such others as some traumatic varieties, which do not require extraction, but needling, removal by capsule punch, or other kind of operation, will not be considered

When the lens is found to be opaque, judgment should determine, after examination, if it is necessary or wise to operate, and if so by which method The field of vision should be taken, and this is best done by the use of a candle, or preferably two, whereby the field may be mapped out with tolerable certainty The tension should always be determined. An examination of the urine sometimes gives suggestive hints as to the cause of the cataract, the presence of retinitis, and probable length of life Herbert[1] rejects cases in which albuminuria is associated with edema The general state of health should be inquired into, especially bronchial or asthmatic conditions, whether or not the patient can lie supine for a long time, and the position usually assumed in bed Some patients can not lie on their backs and provision should be made for others so that they may be supported in bed It is impossible here to dwell on all the detailed information which should be obtained regarding each patient and the many things that must be taken into consideration in determining the propriety of an operation.

Examination into details increases the confidence of the patient, but care should be exercised not to dwell too much on every little defect and thus promote nervousness and anxiety and make the patient refuse an operation, preferring blindness, or the useless treatment of some promising quack. The ophthalmic surgeon, more than any other, should obtain the hearty confidence of these introspective, nervous, blind, old people who are preparing for an operation on their most delicate organ

I shall not enter into much discussion of the advisability of operation, but with others, e g, Brudenell Carter[2] (Bulson[3] very fully considers the advisability of operation), think that old patients, if unable to attend to their ordinary business because of uncomplicated cataract (not associated with any special disease), whether it be mature or not, should be operated on without too long waiting, since these patients, formerly active, often quickly decline and deteriorate in mind and body because of the enforced inactivity This breakdown is es-

* Read in the Section on Ophthalmology of the American Medical Association at the Fifty seventh Annual Session June, 1906

1 Herbert 'Cataract Extraction'
2. Carter Lectures on Cataract."
3 Bulson THE JOURNAL A. M. A., Sept. 23 1905

pecially marked in the cardiovascular system which, in turn, affects the kidneys and other organs with end arteries A little red reflex or the presence of transparent cortex do not deter me from operating, provided that the vision of neither eye is sufficient for the patient's needs, that the cataract is slowly progressive, that the field of projection is good, and that there is no suspicion of serious intraocular disease, e g, beginning retinal detachment or the various forms of serious choroidoretinitis Granting that mild iritis is more common and that an operation for secondary cataract is more often required after operating on immature cataracts, is it not even then better to do so than to keep the patient waiting months and sometimes years? The final results should be as good as after the extraction of mature cataract, and vision is restored much sooner, thus aiding the general health. Having determined that an extraction operation is feasible and advisable, the patient should be impressed with the necessity of as strict antiseptic and aseptic precautions as are possible. He should be made to know that his assistance in keeping quiet and in properly turning the eyes is necessary to obtain a good result, in short, he must be ready to do his part. Unless exceptionally intelligent, he may not appreciate the importance of going to a hospital instead of having the operation performed in a private house, and the dangers should be fully explained to him

If chronic inflammation of the conjunctiva is present, treatment should be instituted to cure the discharge before subjecting the patient to the danger of infection after operation. A test bandage may be placed over the eye for several hours and the discharge, if any be present, examined microscopically If pus is discharged into the eye sac from the lachrymal sac and the diseased condition can not be cured, or time and circumstances will not permit, the puncta may be obliterated by cauterization or the canaliculus closed by a ligature, just before operating as recommended by Knapp[4] If time permits, an operation obliterating the lachrymal sac is often justifiable in these cases Gifford[5] slits the upper tear points and injects some indifferent solution in cases seen several days before operation.

For one week before the operation I have the patient wash the eye by means of an eye cup three times a day with some sterile solution, such as saturated solution of boric acid in distilled water or normal saline solution Eye baths or eye cups if kept scrupulously clean, using frequently boiled and always thoroughly washed and dried before using, are very serviceable. Patients are shown how to use these baths and are also given the following printed instructions

The eye bath about one-third full of the solution, should be gently pressed against the closed eyelids — Take a head position, head forward. The head is then slowly thrown backward, the lids are opened and closed repeatedly and the eyeball moved quite from side to side, during sufficient time to cause the solution to bathe the entire eyeball and the inner surface of the lids. The bath is then emptied, the eyelids pressed closed for a few moments and the head brought forward.

The removal of any eye is mechanically easy, the troublesome part is the hemorrhage and the consequent [illegible] The best method of controlling the hemorrhage is by packing the orbit with gauze, but this is objectionable because it is followed by more or less severe reaction in the eyelids, and the eye is frequently lost by suppuration

The nose should also be sprayed two or three times before operating with a slightly antiseptic solution Lippincott[6] suggests spraying the nasal cavities with a 1 to 2000 potassium permanganate solution On the evening of the second day before the operation a large dose of some cathartic should be prescribed, and in certain cases a large enema given in order that the bowels may be locked for one or two days after operation so as to disturb the patient as little as possible All the hair on the head should be washed the night before the operation, particularly the eye-brows and eye-lashes In certain cases I express the contents of the glands and ducts on the edge of the lids by gently stripping these margins between the finger on the skin and a smooth glass rod on the conjunctival surface Sometimes this should be done on several days and in some cases a mild sterile ointment should be applied Great care is exercised in preparing the field of operation, and I think only unirritating solutions, such as boric acid, normal saline solution, etc, should be used The skin surfaces about the eye should be thoroughly cleansed, and the surgeon himself or some skilled assistant should then cleanse the conjunctival sac as thoroughly as possible This may best be done by pressing the solution from pledgets of cotton sometimes by gently and carefully wiping the conjunctiva of the lids with the moistened cotton, avoiding the slightest injury to the cornea The hair and scalp should be covered with either a rubber bath cap or towel which has been kept in an antiseptic solution Other sterile towels, preferably dry, are laid over the neck and rest of the patient extending to the chin, but not above the mouth, as the patient's breath would then be thrown directly into the eye

Since micro-organisms (*Streptococcus* and *Staphylococcus pyogenes* and *Pneumococcus*) normally abound in the saliva of both patient and operator, infection from this source should be given consideration G Hotta[7] states that infection occurs without fail if the saliva is brought into contact wounds of the cornea and is likely to occur if there is impeded drainage of the tears from an affection of the lachrymal passage The operator's and surgeon's mouth may be rinsed out with antiseptic solution before the commencement of an operation

In case of dressing the patient's [illegible] eye by means of a cotton plug over the [illegible] and pressure bandage is done, I have him keep directly away from the eye [illegible] following the [illegible] side and six or seven inches long [illegible] on its adhesive side, [illegible] an inch of its width along one margin, [illegible] cut lengthwise [illegible] adhesive edge of the [illegible] over the eye, so that [illegible] the nose and mouth [illegible] eyelashes from the eye [illegible]

If [illegible] suffering from [illegible] affection of the [illegible] eyelids, [illegible] the eye [illegible] Hemorrhage [illegible] Before [illegible] if [illegible] for [illegible]

and hair of every surgeon should always be covered by a gauze cap I have made a simple spectacle-shaped appliance that lies below the surgeon's spectacles, if he wears any, over the bridge of the nose and on the cheeks, and is supported by strong temples over the ears A strip of gauze about one yard long may be drawn over this frame so that the ends meet below The lower ends of these strips for a distance of ten or twelve inches are then split by scissors and the two halves, one on each side, tied or fastened by a safety pin behind the neck so that the gauze hangs over the mouth and passes under the chin around the neck As many layers of the gauze may be used as are thought to be necessary With this appliance the surgeon's breath will not pass upward into his own eyes or blur his lenses, but pass out to the side, and all saliva or excretions from the nose will be arrested in the gauze and he can still talk and breathe freely

The confidence of the patient is increased by careful attention to every detail A little previous instruction as to his own behavior, how to turn the eyes downward and sometimes also a little outward, is very helpful In particularly nervous individuals I sometimes introduce the speculum in the eye under cocain anesthesia at my office or some time before operation and explain to them how to hold and how to turn the eye up, down, to the right and left, and thus permit them to become accustomed to it Herbert[1] of India insists on carefully training the patient Many a blind patient can easily direct the eyes downward toward his own uplifted hand Sometimes I hold instruments about the patient's face and touch the eye, pretending that I am operating, until the patient being assured that I am nearly through becomes quiet, then I commence to operate I have never been detected in this ruse

I usually sterilize my instruments by boiling them from five to ten minutes, those with cutting edges being wrapped in cotton, and then place them in a sterile solution contained in a shallow tray, the bottom of which is covered with a few layers of sterile gauze to keep the instruments from coming in contact with each other

In addition to about six instillations of 4 per cent sterile cocain solution, a minute or two between each instillation, the lids remaining closed to prevent drying of the corneal epithelium, I inject a few minims of a sterile adrenalin and cocain solution with a sterilized, aseptic, all metal, solid-plunger, hypodermic syringe under the limbus conjunctivæ where I intend to enter the Graefe knife in commencing the section, and also in the opposite limbus where the point of the knife is expected to exit from the anterior chamber This adrenalin and cocain solution is prepared by placing a hypodermic tablet of adrenalin and cocain in fifteen minims of distilled water which is boiled for two or three minutes This gives a sterile solution of approximately 1 per cent cocain and 1/4500 adrenalin This assists me in commencing a large conjunctival flap, which I believe should extend three or four mm beyond every portion of the corneal flap and not merely from eight to ten mm at its upper margin as made by others, e g, Clarke[9] The adrenalin greatly checks bleeding under the flap, which should be folded back on the cornea at once to prevent the blood from being forced into the anterior chamber I recently learned for the first time that Koller and H Gifford[10] had made subconjunctival injections of cocain at the limbus and that Gifford formerly made large conjunctival flaps In the same paper he states that he abandoned this hypodermic method of using cocain because the artificial edema of the flap prevented ready coaptation, and he also advocates a small conjunctival flap I have always used the adrenalin and cocain together and find that the flap adheres very readily and strongly, not being edematous It seems that the trifling disadvantages of this large conjunctival flap, viz, hemorrhage, care of folding it on the cornea when it partially obscures the iris, and rarely filtration edema, are far outbalanced by its great advantages, since it speedily becomes agglutinated to the raw surface on the sclera closing the wound externally and sealing it, and thus aids in the accurate coaptation, and smooth and speedy healing of the scleral and corneal wound margins with lessened postoperative astigmatism, and comparative immunity from after infection, incarceration, or iris prolapse

The knife is first entered into the temporal conjunctival bleb produced by the subconjunctival injection of the cocain and adrenalin solution three or four mm or more from the sclerocorneal junction After passing through the bleb the point of the knife is directed toward the center of the eye so as not to get between the lamellæ of the cornea, and when it has opened the anterior chamber some of the cocain enters and renders the anesthesia more profound The knife is passed across the chamber and through the opposite corneoscleral junction into the other conjunctival bleb I then make a large section in the corneoscleral junction, including nearly the upper half of the cornea, with a very large completely-bordering conjunctival flap A small section strips the cortex from the lens, rendering the delivery of the latter difficult, requiring greater force, entangling the iris, and bruising it and the lips of the incision between which latter cortical débris is likely to be retained, thus giving a starting point for infection

In some patients with shallow anterior chamber, in order not to scalp the iris it is better to make a smaller section at the corneoscleral junction than the one described, and to enlarge it to the required dimensions by strong blunt-pointed scissors If there is a deep anterior chamber the conjunctiva may be raised without the use of the hypodermic at the point of exit of the knife, so as to obtain a conjunctival flap by waiting a moment after the knife has passed through the cornea and sclera, or sometimes by slightly turning the knife so as to permit a slight amount of aqueous to flow out under the conjunctiva (Brudenell Carter[2]) The use of the hypodermic is to be preferred to this method, in which too much aqueous might escape, and the iris, falling over the knife, might be scalped and a portion of it sacrificed It is easy to get a large conjunctival flap when started correctly with the above-mentioned precautions, if the section lies clearly in the corneoscleral junction and not as usual in the cornea It should be remembered that in front at this junction the sclera slightly overlaps the cornea, and such sections should include not only a little of the cornea internally, but also some of the sclera externally, and must do the latter in order to have a conjunctival flap This is not identical with the purely scleral section described by Fuchs[11]

In making the incision it is well to have the patient look downward and a little outward so as to give the point of the knife greater freedom of movement without sticking into the inner ends of the lids Care should also be taken that no portion of the blade which has once touched the lid margin be allowed to enter the section The cross-bar of the speculum should be well

9 Clarke Opthalmology July 1905.
10 Gifford Am Jour Ophth November 1904

11 Fuchs "Text book of Ophthalmology" p 695

down against the cheek, as in my adjustable speculum [12] The speculum described by Beard[13] is also excellent, since it can be bent so as to place the cross-bar on the cheek Each one has much the same old style of solid lid holders which will not catch the corneal section on removal or permit the contents of the glands in the margins of the lids to be deposited on the section I think that when the section is made in the junction between cornea and sclera, although there is greater hemorrhage, it is to be preferred to one made in the cornea only, for the following reasons

1 Since there is a good blood supply at the limbus, healing will be more rapid than in the bloodless cornea

2 A conjunctival flap with all its advantages may be obtained which can not be done in a purely corneal section

3 A section within the cornea will usually be smaller and therefore scrape more cortex from the lens and will have its margins more severely wounded than will the larger section in the sclerocorneal junction

4 The more peripheral location of the wound is an advantage in delivering the lens, as it has to turn less on its axis

5 Tags of capsule, etc, are not so liable to be incarcerated in a peripheral section, since it is farther from the pupillary area and heals much more promptly with less escape of aqueous, being protected by the conjunctival flap The danger of prolapse of the iris, which on first thought might seem to be increased, is lessened

6 The less peripheral the incision the higher is the degree of postoperative astigmatism (Majewski[14])

After instilling another drop of cocain the conjunctival flap, by means of a spatula, should be carefully folded back on the cornea (the larger the flap the more easily this is done and the better it remains) else it would subsequently be in the way and possibly might be cut off This folding back of the flap on the cornea should be done as soon as possible after the section is completed, as otherwise blood might be forced into the anterior chamber If there is some hemorrhage from the conjunctiva a few drops of adrenalin should be instilled and nothing further done for a few moments until all the bleeding has ceased

After telling the patient to expect a little momentary pain and cautioning him quietly and gently to keep looking downward, both eyes open, without any tension or squeezing and to keep his hands open and not set the jaws, I pass an iris forceps with small teeth only on the lower back edge and not on the end, into the anterior chamber The forceps grasps the iris a very little beyond the middle of its anterior surface and never at or near the pupillary margin, as is generally advised in all the literature at my command, when any specific instruction is given The iris is then withdrawn folded on itself, until the pupillary edge lies just outside the corneoscleral incision By grasping the iris as described its whole width may be withdrawn from the eye with only one-half the traction and correspondingly less pain and tearing of the iris tissue than if it be grasped at or near its pupillary margin The iris should be pulled no more than is absolutely necessary, so as to wound this delicate nervous structure the least possible and thus reduce pain exudation and hemorrhage For example, if it can be readily understood that if the iris is four mm in width and it be grasped at the pupillary margin, this margin would have to be drawn eight mm from its original position in order to have the whole width of the iris outside the incision If the iris be grasped at the middle as described the forceps would need to be withdrawn only four mm and the pupillary margin would be stretched only four mm from its original position instead of eight mm as in the other method one-half as far, only one-half as much traction and less than one-half as much tearing and injury By means of a sharp pair of strabismus or other scissors held alongside and parallel to the forceps, the folded iris tissue is cut through with one snip in the vertical meridian from pupillary edge to outer periphery, a true sphincterotomy and iridotomy, but not an iridectomy, since no iris tissue is removed Properly speaking sphincterotomy means division of the sphincter only, but I prefer to use it in this wider sense, since the term iridotomy, although more proper, has been already used for a different operation and would be likely to give rise to confusion I have been performing sphincterotomy for some time, and until the preparation of this paper believed it to be a new method I recently found that Williams[15] in 1881 and Meyer[16] in 1887 incidentally referred to it, each, however in only a part of one sentence

I think the general consensus of opinion, even though contrary to that of many distinguished surgeons, is that a combined operation is usually preferable to simple extraction especially in complicated cataracts or those with posterior synechiæ or rigid pupils, in that there is less danger of subsequent iris prolapse or incarceration, less tearing of the iris tissue in general, and less retention of cortical matter because of less stripping of the lens by the divided sphincter, and also because less pressure is required to expel the lens through the enlarged pupil.

Preliminary iridectomy or sphincterectomy seems to give excellent results but it exposes the patient to the dangers of infection through two operations requiring the opening of the eyeball It does not seem that the facility of removal is increased sufficiently to warrant the extra risk, loss of time, expense and trouble to the patient Objections urged against the combined operation are that it mutilates the iris and furnishes a focus for infection, that the light entering the larger pupil dazzles the patient and is not so perfectly focused as that passing through a small pupil I do not wish, however to thrust myself out on this common battlefield

Dividing the sphincter and width of the iris before attempting delivery of the lens merits consideration for the following reasons

1 If they are completely divided less resistance will be offered by the sphincter and iris to prevent the escape of the lens from behind them, so that less pressure will be required to deliver the lens and consequently less tension is placed on the suspensory ligament, and there is less tendency to prolapse of vitreous

2 Since the iris is cut completely through, the anterior support to the upper margin of the lens opposite the section is greatly reduced, so that the upper margin may be more readily tilted forward and pass out of the eye without so much chance of turning over or other accidents

3 Because of the large opening through which the lens may pass there will not be nearly as much stretching or rupturing of the other portions of the pupillary margin and iris tissue, and not as much subsequent exudation, even though there might be more exudate and

12. Stevenson Ophthalmic Record, April 1904
13 Beard Ophthalmic Record, January, 1905
14 Majewski Annals d Oculistique, vol. cxxvi, 99
15 Williams "Diseases of the Eye."
16 Meyer "Diseases of the Eye"

hemorrhage just after making the incision in the iris At this time, however, blood or exudate can always be washed out of the eye by the irrigator The more tears or ruptures in the pupillary margin of the iris, the greater the number of posterior synechiæ which subsequently form between the torn iris and capsule.

4. The margins of the larger opening through which the lens may be passed do not strip the cortical matter from the lens mass and retain it as does an undivided sphincter The coloboma furnishes a sluice way through which the soft cortical matter may be readily removed (Bulson[8])

5 Thickened, inelastic, flabby irides unless incised, are much stretched and torn, and are more prone to remain outside the section, or later to prolapse because they are pressed into a funnel shape during the exit of the lens

6 Free division of the iris establishes easy and continuous passage for the fluid between the anterior and posterior chambers, even to the periphery When the iris and sphincter are undivided the fluid is said to collect in the posterior chamber, especially behind the peripheral portion of the iris, and if the corneal section should suddenly open because of some sudden pressure of the eye muscles or other cause, e g, coughing in chronic bronchitis, this pent up fluid is liable to prolapse the unsupported iris in its rush to escape from the eyeball

7 It is easier to replace the divided iris within the section at the time of operation (a) because of the free connection between the anterior and posterior chambers, (b) the sphincter divided in only one place is stronger than when torn in many, (c) the body of the iris and sphincter is not thickened so much by exudation and hemorrhage, (d) the elasticity of the structure has not been destroyed to the same extent

8 There can not be as strong a tendency to the development of postoperative glaucoma

I think that iridotomy or sphincterotomy is preferable to iridectomy or sphincterectomy for the following reasons

1 The operation is easier and simpler to perform, consisting of one simple straight snip of the scissors held at right angles to the surface of the cornea

2 The total length of the cut iris is less on account of the long U-shape of the iridectomy incision from which there is greater exudation and hemorrhage The cut going directly to the periphery is also in a better position within the eye than a mere sphincterectomy

3 Iridectomies as done before cataract extraction are usually not peripheral, and the peripheral portion of the iris tends to retain the lens and afterward the fluid, behind it When the incision extends through the width of the iris the lens and fluid are not retained behind it.

4. The coloboma is much narrower, a mere slit peripherally, than in an iridectomy and being altogether or almost covered by the upper lid, the patient is not subsequently dazzled so much by the light as after an iridectomy which leaves a broader coloboma

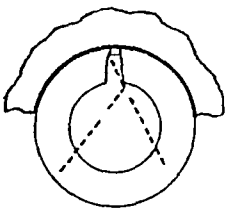
5 The shape and size of the coloboma, particularly the sharp edges at the pupillary margins, are well known, so that when the toilet of the eye is made it can be readily seen when the iris is completely within the eye It is not always possible to know the exact size and shape of the piece of iris removed in an iridectomy, thus making it a little more difficult to know when the iris is properly straightened out within the eye

Macnamara[17] in 1882 advocated the excision of a small peripheral piece of iris leaving the sphincter intact. Dr Taylor of Nottingham removed a sufficiently large peripheral piece of iris to permit the egress of the lens H B Chandler[18] reports 312 cases of cataract extraction with a small peripheral buttonhole in the iris This latter method is no doubt better than a simple extraction, as the fluid can more readily pass from one chamber to another, and will not be so liable to dam up behind the iris and to cause its prolapse on sudden escape of fluid through the section Since the buttonhole (if not made too large) will be covered by the upper lid after operation, there will be no apparent deformity of the iris due to the artificial coloboma as after iridectomy or sphincterotomy I think, however, that sphincterotomy is to be preferred to this small peripheral buttonhole in the iris for the following reasons

1 Without any personal experience with the latter, I should think it somewhat more difficult to do, even if the iris would need to be withdrawn less, since care would have to be exercised, not to make the opening too large and so have the lens pass through it instead of through the pupil, or such that it would catch and hold the edge of the lens Some operators make the buttonhole after the expulsion of the lens

2 There would not be such free communication between the chambers, and correspondingly greater danger of subsequent iris prolapse

3 The sphincter being intact, this operation is open to most of the objections raised against the simple operation, e g, stripping of the cortical substance from the lens, stretching and tearing of the sphincter and adjacent iris, increased hemorrhage, exudation and thickening, greater force required to expel the lens, with consequent greater danger to the suspensory ligament, prolapse of vitreous, etc



This diagram represents position and size of the conjunctival flap position of section in corneoscleral junction and narrow coloboma after sphincterotomy the dotted lines representing the two incisions in the capsule, the angular flaps which curl up lie on either side of the short dotted line, the lower flap having the sharper angle curls more out of the way than the other

The next step in the operation is to perform a simple but efficient capsulotomy The varieties of capsulotomy described are legion, but most of them are more or less impracticable because difficult, and some are even impossible to perform It is more or less difficult to make horizontal incisions in the capsule and considerable dexterity is required to make some of the combinations of incisions described A few operators, DeWecker, Eugene Smith,[19] remove a portion of the anterior capsule by means of capsule forceps Knapp[20] states that dislocation of the lens with prolapse of the vitreous and its consequences are not unlikely accidents in removing the anterior capsule Others follow Pagenstecher's method and remove the lens within the capsule The

17 Macnamara Diseases of the Eye
18 Chandler Archives of Ophthalmology January 1904
19 Smith THE JOURNAL A. M A. Sept. 26 1891 also Am Jour Ophth., November 1904
20 Knapp Am Jour Ophth September 1905

anterior capsule may be so incised without removal that it will not obstruct the pupillary area or have anything to do with secondary cataract in this area, although, as in every method, some cortical matter is retained in the peripheral areas Secondary cataract in the peripheral area is sometimes useful by partially blocking the entrance of light into the coloboma Of course the posterior capsule is the one chiefly concerned in the production of secondary cataract in the pupillary area, deposits in the form of "pupillary membranes" sometimes form on the front of this capsule A good sharp cystotome is necessary so that but two cuts will be needed in making the two incisions More are unnecessary and will even be harmful, since then small strips of capsule are liable to lie in the corneal section preventing prompt healing, and therefore exposing the eye to greater danger of infection The cystotome I use has no sharp points to catch anything, it has a blunt end so as not to injure the iris when pushed up under it, and a cutting knife edge that will cut either way and may be easily sharpened The instrument is passed with its cutting edge backward, across the anterior chamber and for some distance under the distal portion of the iris, toward either side, usually the nasal One straight cut is then made across the whole lens passing through the pupillary area about 1 mm from the pupillary edge of the iris and into the coloboma made by the sphincterotomy so that this incision extends as nearly as possible throughout the whole anterior capsule, and not merely in its pupillary portion If the peripheral portions which are thinnest are not cut, cortical masses are more liable to be retained within the capsule, and greater force is required to remove the lens from its capsule The cystotome is then again passed under the distal portion of the iris, but on a different side from the one chosen before, and a second cut is made passing more nearly to the center of the pupillary space, and meeting the first incision at the beginning of the coloboma or proximal pupillary margin This method of doing a capsulotomy is worthy of attention for the following reasons

1 It is simple and easy to do

2 There are no strips or tags of capsule that can possibly get into the corneal wound, especially if the incisions are so large and peripheral that the capsule will not be torn by the exit of the lens Promiscuous and extensive laceration of the capsule is harmful because tags of capsule are sure to lie in the section and retard or prevent healing, causing an uneven irritable scar which may help later to cause iritis, especially as there will also be more posterior synechiæ.

3 The flaps of capsule will tend to roll up out of the pupillary area The sharper the angle of the flap the farther it will roll out of the way, this has been considered in locating the position of the incisions The thin sharp flap from below will roll considerably downward out of the way The lateral flap will roll somewhat to the side and out of the pupillary area and the largest portion on the other side of the first straight incision will also retract slightly out of this area (some might prefer to divide this last portion by another oblique and similar incision) While all the flaps of capsule will retract from the pupillary area, none of them are so situated that they can get into the corneal wound.

After capsulotomy is completed the next step is to expel the lens This is done in the usual fashion by making pressure toward the center of the eye by a spoon or spatula over the lower limbus, while another spatula very gently depresses the sclera at the corneoscleral junction. After the lens has passed one-half way through the section the lower spatula should follow it with less pressure on the eyeball A very little stroking of the cornea may be indulged in to remove some of the larger particles of the cortical substance, but with many operators, I believe, it is usually better to use, with proper precautions, intraocular irrigation in removing blood, exudates, or cortical substance from the interior of the eye, and for this purpose, I prefer to use gently a slightly warm sterile boric acid or normal saline solution in a properly constructed gravity syringe. Great care should be used to prevent the retention of quantities of solutions within the eye sac.

This question of irrigation or lavage has been fully dealt with in many excellent papers by Reik,[21] Beard,[22] Bulson,[3] and Lippincott,[23] and does not need further commendation or elucidation here. I think that after its use, which should not be continued too long, capsular opacities are less frequent or at least less dense, so that secondary operations are not so frequently necessary By its use, except in some sclerotic cases with no lens débris when it is not required, we can obtain a more nearly perfect technic and secure striking, often brilliant results The patient is usually much encouraged by the better vision after syringing out the lenticular débris, and is stimulated to do his part toward obtaining a happy result. After the use of the irrigator the iris seems to contract better and sometimes assumes its proper position without any manipulation McKeown claims that the tendency to subsequent prolapse of the iris is lessened, and this should be expected since retained cortical masses by their swelling tend to increase tension and possibly prevent smooth healing and coaptation of the wound margins Since there is more complete elimination of débris and speedier closure of the sclerocorneal section, and since if micro-organisms have entered the eyeball, many of them will be washed out, sometimes so diminishing their number as to render them harmless, inflammation and infection are less liable to result When the anterior chamber remains empty and the cornea shrunken, the corneal dome may be re-established and the lips of the incision brought into correct apposition, aiding rapid healing and restoring corneal curvature It should sometimes be used to remove blood from the eye during the operation as after sphincterotomy and before capsulotomy is done

After irrigation the toilet of the eye is completed If the iris is not in its proper position as shown by a sharply defined coloboma, especially at its pupillary corners, a spatula should be used to place it in a correct position and to reduce the tags of capsule lying in the wound I have always been able to do this without any difficulty, but it is possible that rarely a case might be found in which an iridectomy might be necessary if the iris could not be properly replaced within the eye Next after a little mild irrigation of the incision, the conjunctival flap is gently folded back into position by a spatula, and smoothed out. Its surfaces are usually sticky and it readily and strongly adheres, undoubtedly assisting in the accurate coaptation of the lips of the incision which, therefore, heal more quickly and make infection correspondingly less likely Dr C F Clarke[9] claims that a conjunctival flap diminishes the amount of subsequent astigmatism Earnest F Maddox[24] advocates suturing the conjunctival flap I doubt the pro-

21 Reik Annals of Ophth. July 1903
22 Beard Ophthalmic Record, April 1905
23 Lippincott Ophthalmology January 1906
24 Maddox Ophthalmoscope November 1904

priety of prolonging the operation by this procedure, not only because the flap adheres so strongly without suturing, but also because, as Melville Black[25] has pointed out, the eye must be prepared, anesthetized, and a speculum introduced in order to remove the sutures which also beget infection Kalt proposed a corneal stitch inserted like a Lembert intestinal suture, before operation, the central loop being long and drawn out of the way during the operation, after the completion of which the ends are drawn taut and tied

Finally, I usually instil one drop of one-half per cent of eserin sulphate into the eye, as this amount will not irritate and will cause the sphincter to contract slightly and for some time, so that the iris will be less likely to prolapse Fuchs,[11] Gibbons,[26] Jackson,[27] and many other authorities state that eserin lessens the danger of iris prolapse Before the pupil dilates again some remnants of cortex or capsule in the pupillary space may become attached to the iris, and when the pupil dilates be drawn from the central pupillary area A dry, sterile, double eye pad, made by sandwiching a little sterile absorbent cotton between a few layers of sterile gauze, is then lightly fastened usually over both eyes by strips of adhesive, which latter are not so easily disturbed during restlessness as a roller bandage, and which may be cut in removing the pad for the first few days

In order that no pressure may be made on the eyelid of the eye operated on, the strips are placed over the margins of the eye pad and do not directly overlie this eyeball For the first day or so they are tightly placed over the pad covering the eye not operated on, making some pressure and thus tending to prevent the opening of the eyelids A dressing on both eyes sometimes causes mental depression or excitement in old people For the first few days it is well to cover the eyes for protection with some style of ocular mask or shield, such as Ring's mask, being careful not to make thereby any pressure on the dressing or lids I have not had any experience with the so-called open method of treating these cases advocated by Fuchs and other distinguished ophthalmologists, especially those abroad, who claim smoother and speedier healing with less frequent hernia of the iris

Undoubtedly, postoperative astigmatism is influenced by a conjunctival flap, the size and location of the section, the sharpness of the knife, or by anything which influences healing, e g, prolapse or incarceration of the iris, swelling or cortical débris, presence of capsule tags in the wound, muscular action of the lids and eye muscles, and especially by any pressure made by the lids on the eyeball due to the tension of the lids, and particularly that due to pressure from dressings and bandages The pressure of the lids can not be diminished unless possibly by antispasmodics, but care can be exercised that little or no pressure is made on them It can be readily understood, for example, that if the section lies in the upper corneoscleral junction, any pressure on the cornea would make the upper flap of the cornea slide upward, overriding the adjacent sclera This would make the vertical meridian less curved, not only because the cornea in this meridian has become flattened but also because the upper edge of the cornea has been displaced forward on the sclera

The cornea being a stiff structure, if it lengthens in one direction it must necessarily shorten in another, and this latter is what takes place in the horizontal meridian Also the pressure made on the sclera, which projects forward in the rounding shape of the globe, pushes it backward and brings thos anterior portions in the horizontal meridian closer together Thus the curvature in the horizontal meridian is increased Pressure on the sclera in the vertical meridian affects the limbus in this meridian exactly as in the horizontal, but the cornea and sclera not being joined together, the sclera merely slips under the cornea and does not pull the corneal margin with it as it does in the horizontal The flattening in the vertical and increase of curvature in the horizontal meridian, are exactly what takes place after section of the eyeball above, and I think the chief cause is the degree of pressure made by the lids and by different dressings, which latter should be dispensed with at the earliest possible moment consistent with safety The axis of the correcting cylinder is usually nearly parallel to a line joining the points of puncture and counterpuncture

AFTER TREATMENT

The patient is gently conveyed (carried) to his bed with as little muscular effort on his part as possible The eye is inspected at the end of twenty-four hours and redressed with usually a single eye pad This is done each day as long as necessary, the time varies from two or three days to a week or longer In making these dressings I use only sterile normal saline or boric acid solutions, and never instill any collyria unless specifically indicated, as atropin in iritis, a mild form of which is nearly always present. After the use of a few drops of cocain several operators (Bulson[d]) when the wound has been securely closed for five or more days, instill three or four times a day for a period of four days, first a 5 per cent. and later a stronger solution of dionin, claiming that it increases the effect of atropin, assists in the treatment of iritis, and promotes the absorption of exudates in those cases which are at all affected by the drug I have several times used a 5 per cent. solution of dionin as early as the third day without doing any harm, but am unable to state whether or not it was of any value

The quiet of the patient for the first day or two is especially important All physical exertion, coughing, vomiting, and hiccoughing should be guarded against The patient should be made as comfortable as possible, should be informed about his surroundings and impressed with the necessity of quiet. For one day it is best, if possible, to have the patient lie quietly on his back or on the side opposite the eye operated on, without turning, and to permit movement of the arms and legs only When necessary, the head may be made comfortable by the nurse, and after the first day the patient may turn in bed, if assisted by the nurse I advise fluid or soft diet for at least two days, locked bowels for one or two days, and afterward, if necessary to prevent straining at stool, the use of mild laxatives and enemata To reduce the discomfort following the normal amount of reaction and to diminish the pressure of the lids on the eyeball, I think it is well when not contraindicated for some particular reason and when it has been used previously without evil results, to give a hypodermic injection of morphia sulphate 1/8 or 1/4 gr one hour before operating, which may be repeated every 3 or 4 hours if considerable discomfort continues Dr Eugene Smith[28] advises morphin hypodermically immediately after the operation because of its sedative and myotic action The first

25 Black Ophthalmic Record, February 1905
26 Gibbons "The Eye, Its Refraction and Diseases
27 Jackson Philadelphia Med. Jour May 11 1901

28 Smith Knapp's Archives, 1894 p 85 also Am Jour Ophth. November, 1904

night, if the patient is restless and can not sleep, a dose of some hypnotic may be given at bedtime After explaining the reasons for it, it is sometimes advisable to tie the patient's hands to the foot of the bed by long strings, strong enough to wake him if any effort is made to reach the face, but not so strong as to frighten him by making him wonder what he would do in an emergency, such as fire A simple way is to fasten the sleeves of the night gown to the bed clothes by small safety pins

In conclusion, I wish to direct attention to the necessity of thorough examination and preparation of the patient, to the screens for the patient's and operators' breath and saliva, to the large, completely bordering conjunctival flap which is easily folded on the cornea the method of obtaining it, the position and size of the sclerocorneal incision, where to grasp the iris when withdrawing it, the sphincterotomy and its advantages, the simple but efficient capsulotomy, the necessity of avoiding pressure on the lids and eyeball by the dressing, and the simple after treatment

CATARACT EXTRACTION WITH MODIFIED IRIDOTOMY *

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The following operation seems to possess advantages not offered by any other method of cataract extraction While thus far it has been performed in only a few cases, it has given satisfactory results in all More extended experience with it may, of course, bring to light unforeseen objections, but this is not anticipated

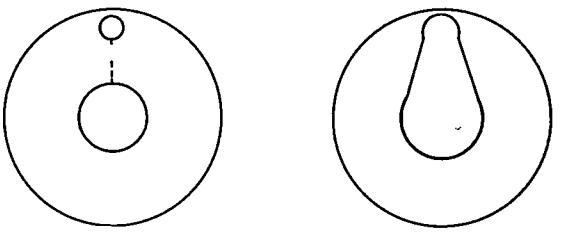
THE OPERATION

The corneal incision is made in the usual manner, probably best at the limbus The iris is then grasped with the iris forceps as near its root as possible and a small bit of tissue excised with scissors so as to leave a small hole in it (Fig 1) The iris will immediately return to the anterior chamber of its own accord De Wecker's small iris scissors, preferably with blunt pointed blades (Noyes' scissors will probably serve as well), are then introduced through the corneal incision, gently opened, and one blade passed downward through the hole in the iris until it projects below the pupillary margin The blades are then quickly closed, thus making a clean cut through the iris to the pupil Owing to the mydriasis produced by the cocain, the edges of the incision will separate, usually at once, as widely as after an ordinary iridectomy (Fig 2) If, however, the iris is pressed against the cornea by the lens, this may not happen until after the lens has been extracted The lens capsule may now be opened with the cystotome or capsule forceps and the lens expressed in the usual way, or the latter may be extracted in its capsule In making the toilette of the wound care should be taken, as after an iridectomy, to free the pillars of the coloboma from the incision It is probably best to instil atropin immediately after the operation, since this enlarges the coloboma and thus lessens the danger of iris prolapse

ITS ADVANTAGES

This operation offers the advantages of both the simple and combined operations without their disadvantages The lens is removed with the same ease as in the combined operation, the danger of iris prolapse is minimized, and cortical matter can be expressed with even greater facility than after an iridectomy Moreover, the modified iridotomy requires no such rough handling of the iris and causes no such pain as iridectomy, while it is superior to the latter in its cosmetic and optical results The excision of iris tissue is made where it will be most effective in preventing iris prolapse and at the same time do the least damage from an optical standpoint. In the case of iridectomy, a large section of the sphincter muscle is always removed so that the reaction of the pupil to light is necessarily much impaired, whereas in this operation the sphincter muscle is simply incised and the pupillary reactions less interfered with For this reason, as well as on account of the narrow coloboma finally obtained, the dazzling on exposure to bright light often complained of after iridectomy is after this method notably absent The optical results are, in fact, practically as good as after the simple extraction or the Chandler buttonhole operation

Objection may be raised to the introduction of an additional instrument into the eye It would seem, however, that the danger of infection or traumatic inflammation must be less from the introduction of a sterile instrument into the anterior chamber than from the trauma to which the iris is subjected in ordinary iridectomy



There are two questions in connection with the operation which probably can be answered only after further experience with it One is the question as to the best situation for the corneal incision, and the other as to the proper size of the hole in the iris I have always made the incision at the limbus, because this must unquestionably give the best optical results An incision here, however, is apt to be attended with considerable bleeding, which, with the conjunctival flap, may obstruct the view and thus render the operation more difficult In regard to the size of the hole in the iris, I have made it as small as possible, but the danger of iris prolapse would no doubt be still further reduced if it were made comparatively large In any case it should not, of course, be made so large as to remain uncovered by the upper lid

* Read in the Section on Ophthalmology of the American Medical Association at the Fifty seventh Annual Session June 1906

Massage as Adjuvant in Treatment of Stricture of the Urethra.—A Settier calls attention to the frequent spastic contraction accompanying urethral stricture, and recommends supplementing surgical measures with inunction of an ointment and massage. In his communication to the *Siglo Medico*, liii, 817, 1906, he states that he uses an ointment to promote absorption composed of 4 gm potassium iodid and 15 gm each of lanolin and cold cream A piece of the ointment about as large as a cherry is massaged into co ing to the stricture, increasing from gen 1 first until so strong that the patient re- peats this daily, and has found 1 juvant measure with surgical

THE USE OF THE SECONDARY CATARACT KNIFE *

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The use of a knife for enlarging and completing the section in cataract extraction was popular with Mackenzie when he published his "Treatise on the Eye" some fifty years ago. I can not find that the subject has received any attention during recent years except in an article of mine[1] in which I failed to credit Mackenzie with his work because I was unaware of it until Dr. Oscar Wilkinson called my attention to it.

It is not my intention to claim any priority in the use of the secondary knife, notwithstanding my knife differs somewhat from any before in use, as well as does my method of using it.

This knife was made for me by Tiemann and has served me so well that I have found no reason for modifying it in any way. I should now feel that my armamentarium was incomplete without it, hence it is always laid out with my other instruments when preparing to do a cataract extraction. If the section is satisfactory in every way it is not needed, but if the section is not large enough or if the iris falls in front of the knife before the section is completed it is invaluable. I feel sure that I have materially improved my cosmetic results since I have been using it.

Despite all our efforts to the contrary, the iris does sometimes fall in front of the knife. To go right on with the section either results in mutilating the iris or completing the section entirely in the cornea. Those

who prefer a corneal section rarely need the secondary knife. Those who prefer to complete the section at the corneal margin or in the conjunctiva will find this knife will enable them to follow their inclinations in the matter.

If the anterior chamber is evacuated by the patient making a sudden movement before the counterpuncture has been made, the knife is withdrawn and the probe point of the secondary knife introduced through the wound into the anterior chamber to a point at about its summit, when it will be found that the section can be made with ease by cutting, with but little sawing movement, at the same time extending the point of the knife around the anterior chamber at the base of the iris until the section is large enough for the removal of the lens.

If, after puncture and counterpuncture, the iris falls in front of the knife, withdraw the knife, remove the speculum and wait a few moments until a little aqueous has formed in the anterior chamber, then replace the speculum and fixation forceps and introduce the point of the secondary knife into the anterior chamber, working over the iris to the summit of the chamber and thence downward, pushing the iris back of the knife until the point passes through the counterpuncture. It will now be found that the iris is held taut by the knife and that the margin of the pupil is back of the knife, and by making a direct traction cut without sawing movements the section can be completed at the corneal margin or in the conjunctiva without mutilation of the iris.

If it is found on pressure and counter pressure that the section is too small for the escape of the lens without unduly bruising the iris it is a very simple matter to enlarge the angles of the wound with the secondary knife.

In a successful cataract extraction obstacles are promptly met and overcome and the operation is completed in the manner planned. Too small a wound demands that it be enlarged or that an iridectomy be performed. A mutilated iris evidences a partial failure, from a cosmetic standpoint surely, and possibly from a visual standpoint as well. Evacuation of the anterior chamber before the counterpuncture is made generally means that the operation should be postponed. I have never yet failed to overcome successfully the obstacles mentioned by the use of the secondary knife. I feel sure that if it is always laid out with the instruments for cataract extraction it will not be long until use is found for it. After once having been used I believe it will become indispensable.

DISCUSSION

ON PAPERS OF DRS. TODD,* STEVENSON, VERHOEFF AND BLACK

DR. M. WEINER, St. Louis, said that he does not believe that the ripening operation has a place now except in exceptional cases. The extraction of the lens in the capsule, he believes, is the better operation. Major Smith, of India, by a large number of operations, proved that there is but little more danger in extraction by this method than by opening the capsule and he has reported so far 9,000 cases. In the last 2,000 cases he has employed iridectomy, which in Dr. Weiner's opinion is safer. Dr. Weiner has done eighteen with no absolute failure and only one bad result which was not the fault of the operation. He advocated extraction of the lens in the capsule for immature contract.

DR. ALBERT E. BULSON, JR., Ft. Wayne, Ind., said that in senile cataract the patient is practically blind and desires useful vision with the least possible risk. Patients in good physical condition have the best chance for a successful operation, but those with constitutional diseases should not be denied cataract extraction, after due warning, as the results in such cases are often up to the average. In uncomplicated cases, if imperfect vision impedes business patients should be operated on, even though the cataract is not ripe, provided that the lens is not in the stage of swelling and that there are no other contraindications. The possibility of postoperative iritis or increased demands for a subsequent discission should not deter one from operating on immature senile cataract. Dr. Bulson said, as results in such cases have been fully as good as after extraction of mature cataract. Dr. Bulson said that the preoperative attention and precautions recommended by Dr. Stevenson are excellent theoretically, but in practice are apt to increase the anxiety of the patient. If the eye is free from discharge and congestion and remains so for from 24 to 36 hours, while the patient is being prepared for operation by laxatives, baths, etc., it is in good condition for operation. As an added precaution the microscopic findings in a smear from the conjunctiva, taken just before the final cleansing, may be considered. In the absence of discharge, Dr. Bulson considers prolonged cleansing with antiseptics superfluous. More attention, he said, should be paid to sterilization of the skin and surrounding parts, particularly the eye lashes. He stated that he believes that Knapp is right in saying "It is better for the patient to be operated on in the afternoon." Dr. Bulson said that artificial light condensed and thrown into the eye by an assistant gives a steady illumination which is under the control of the operator. The position of the operator and the hand to use is a matter which the operator must decide in a manner which will give the best results.

Two drops of a 4 or 5 per cent. solution of cocain dropped into the eye every five minutes for three times, is suffi

* Read in the Section on Ophthalmology of the American Medical Association at the Fifty-seventh Annual Session, June 1906.

1 Ophthalmic Record, February, 1904.

* Dr. Todd's paper is in THE JOURNAL, March 9.

cient, Dr Bulson said, to produce all the anesthesia required for the corneal section and conjunctival flap Any more is apt to produce softening of the cornea and collapse after the section has been made Subconjunctival injections of cocain and adrenalin in his experience have no advantages One local application of adrenalin is sufficient to check hemorrhage from the conjunctival flap It has been his custom to place a drop of sterile cocain solution on the iris after corneal section Except when it can be determined that the lens is sclerosed, or will come out without leaving more or less soft cortical substance, Dr Bulson prefers a rather large iridectomy, as it facilitates extraction of the lens, makes removal of soft cortical substance by irrigation easier, and has a decided tendency to prevent both prolapse of iris and postoperative glaucoma The large coloboma, extending to the root of the iris, is usually covered in a large measure by the upper eyelid, and patients seldom complain on account of the cosmetic appearance or dazzling effect by light Theoretically, the capsulotomy is simple but efficient. Dr Bulson prefers a capsulotomy in which no flap of capsule will have a tendency to curl toward the visual center, with its possibility of interfering with vision through retention of cortical material within its folds For the removal of cortical material there is nothing, he said, which equals irrigation, and it should be preferred to stroking or any other manipulations, but the irrigation should be gentle and not too prolonged. An irrigator, whereby fluid flows by gravity only, is the safest, and therefore, the best appliance for use in washing the anterior chamber For promoting resorption of the soft sticky cortical débris which irrigation fails to remove, dionin, he said, is sometimes useful It should not be used earlier than the fourth or fifth day for fear of reopening of the wound.

The application of 1 to 5,000 bichlorid vaselin to the eyeball as a final part of the operation is worthy of adoption. It keeps the wound covered with an antiseptic, and lubricates the lid edges so that secretions readily pass out to be absorbed by the dressings A light dressing that does not press on the eyeball is all that is required after cataract extraction, and a light but stiff pasteboard mask to protect the eyeball. Idiosyncracy to drugs, such as atropin, should be inquired for, and it is advisable to give alcoholics and smokers a limited allowance of these narcotics to prevent undue nervousness. So far as the eye is concerned, the patient may sit up on the second day Dr Bulson extends the time somewhat during which the eye operated on is covered, as he thinks too early exposure of the eye, with the attending attempt on the part of the patient to see, is a prolific source of mild irritative fundus lesions.

DR. ALLEN GREENWOOD, Boston, said that the operation as described by Dr Verhoeff is an extension of the buttonhole operation devised by Dr Chandler to prevent iris prolapse, and by its cutting of the bridge of iris tissue between the buttonhole and the pupil practically converts the Chandler operation into a very narrow iridectomy This adds to the advantage of the buttonhole operation a greater facility of removing the lens and cortical débris The narrow coloboma produced by this operation must reduce to a minimum the disturbances produced by the excessive light in the eye, often complained of as following the ordinary iridectomy and must be of value on this account. The ordinary combined operation is chosen, by men who use both the simple and combined methods, in cases in which there is a large lens, a shallow anterior chamber and a sluggish iris Given such a case it seems to Dr Greenwood that the making of a buttonhole, followed by the crowding in of a pair of scissor blades with the necessity of pushing back the lens with the deeper blade would cause fully as much disturbance to the iris and pain to the patient as a small, well performed iridectomy and calls for two operations on the iris, with the danger of injuring Descemet's membrane. In doing the combined operation he tries to make the iridectomy as narrow as possible. It is possible to do this so that the sphincter is barely divided or a thread like bridge of sphincter be left It is an open question whether a narrow iridectomy will not answer better, with its single introduction of a pair of iris forceps, than the modified iridotomy, with its introduction of a pair of scissor blades following a buttonhole iridectomy Dr Greenwood said he could not agree with Dr Verhoeff's statement that his procedure offers the advantages of the simple operation without its disadvantages Any division of the sphincter of the iris must impair its function and any cutting of the iris must be an added traumatism to the eye The objection to the simple operation is the danger of iris prolapse, but neither an iridotomy nor an iridectomy will wholly prevent some entanglement of iris tissue in the corneal wound During the past two years Dr Greenwood has had no case of iris prolapse when he has done simple extraction, and this he ascribed largely to the use of intraocular irrigation in all cases The hemorrhage which Dr Verhoeff complains of from a section at the limbus can be largely prevented by the use of a weak solution of some of the suprarenal gland extracts Dr Greenwood said that while Dr Verhoeff's operation combines some of the advantages of the simple and of the combined operations, it is not true that it has all the advantages and none of the disadvantages, in many cases it would not be applicable. He stated that in the cases requiring an iridectomy he should prefer a narrow iridectomy to the modified iridotomy, except possibly in cases of immature cataract. In the extraction of cataract when the sight of the patient is at stake, Dr Greenwood feels conservative surgeons will be loth to abandon so successful an operation as the ordinary combined extraction for one which requires the introduction of a pair of scissors within the eyeball of a conscious patient in addition to the usual operative procedures

DR. CASEY A WOOD, Chicago, suggested the further use of this probe-pointed knife. He fancies that the falling of the iris over the blade of the knife is not more common than the mistake he has seen made, and once made himself, of turning the blade of the knife down and finding that it would not cut its way up because of the error There is no reason why this probe-pointed knife should not be introduced through the wound and the incision completed in that way, nor would it be any worse than to attempt to turn a small Graefe knife 180 degrees, as he has seen done, to make a better cut when that same error has been made

DR L. WEBSTER FOX, Philadelphia, said that a year ago Dr Black sent him one of his probe-pointed knives with the request that he give it a fair trial in cases in which he found it applicable. At the time Dr Black devised this knife for enlarging the wound in simple cataract operations he was not aware that both Wharton Jones in 1847 (page 252) and Mackenzie in 1854 (page 795, fig 84) not only described, but illustrated in their works on the eye knives used for the same purpose. At that time, however, the narrow bladed von Graefe knife was not in use and the knives devised for enlarging the wound were manipulated in a different manner from that suggested by Dr Black Dr Fox finds these knives most useful in enlarging the wound in glaucoma operations, or in enlarging the wound in secondary cataracts, when necessary He is not an advocate of the simple operation, except in very well selected cases The incisions in cataract operations have never been described as carefully as they should be in our text-books There are many different incisions, commencing with Liebrich in the lower half of the cornea, and ending with von Graefe in the upper part of the eyeball The proper beginning of an incision, Dr Fox thinks, is the first step toward its successful termination. A Beer's or Sichel's knife will make an old style flap if made directly parallel with the corneo-scleral margin, starting usually a little above the horizontal plane of the eyeball By some dexterity of manipulation a flap is made by which the lens is easily delivered. Ophthalmic surgeons in performing any cataract incision must bear in mind the proportions of the dimensions of the lens in relation to the inner circle of the cornea or to the opening wished for It is necessary, therefore when using the narrow bladed knife to have the cutting edge at right angles to the horizontal diameter of the cornea, the blade should be started as if it were passing downward to the center of the pupil toward the point of the nose, or at about an angle of 60 degrees, then rotating the point of the blade upward, making a counter puncture opposite the point of puncture When the diameter of the cornea is small the anterior chamber
the iris pushing forward with enlarged I
it would be almost impossible the simple

without more or less of the iris becoming involved on the cutting edge of the knife—this must be avoided as described by both Wharton Jones and Mackenzie Dr Fox prefers the combined operation When he wishes to perform a simple operation he carefully selects an eye with a deep anterior chamber, large cornea, and prompt reaction of the iris to light The knife devised by Dr Black, he said, will be a most useful addition to our armamentarium, for its usefulness is not limited to the field to which Dr Black assigned it

DR OSCAR WILKINSON, Washington, said that Dr F Bischoff, London, in 1793, in his book, "A Treatise on the Extraction of Cataract," speaks of a blunt pointed knife in cataract operation On page 52 he describes how to avoid injuring the iris when it happens to fall in front of the knife as he is making the incision

DR. WENDELL REBER, Philadelphia, declared that the first thing to be considered is the welfare of the patient and not the brilliancy of the operation It is our duty to view the majority of cataractous eyes as sick eyes and for this reason Dr Reber thinks it wise in these cases to do a preliminary iridectomy (not a ripening operation) The objections of course are well known

As to Major Smith s operation, Dr Reber determined ten years ago to try this very operation He did it four times. When it succeeds the results are beautiful beyond words, when it does not, the result is abyssmally awful. Three cases were perfect in their results The other patient is wearing a glass eye and Dr Reber was so intimidated by this high relative failure that he abandoned the operation. Whether or not we do an iridectomy, he thinks that we will do well to consider the matter of delivering the lens in its capsule He has devised a 12 mm watch crystal of the same curve as the cornea which may be put over the cornea when there is vitreous prolapse of a moderate character, permitting one to inspect the cornea and prolapsed iris through it, and to introduce a corneal stitch if it is thought necessary

DR S L. LEDBETTER, Birmingham, Ala , stated that a few years ago a case of eye instruments that had belonged to an old physician who had died a few years before was given to him and in it was a knife that corresponds closely to the one Dr Black uses Dr Ledbetter did not know what the knife was for until he read the article. Since then he has used it twice and it worked very well

DR S LEWIS ZIEGLER, Philadelphia, said that the older operators probably all favor preliminary iridectomy He has often heard Dr Harlan say he would want it done on his own eye if he had to have a cataract extraction Dr Ziegler thinks it is going out of date If the capsular incision is done in a free manner there is no danger of retained cortical matter As to iridectomy, if we are going to do one, the key hole iridectomy is the best The iris should be grasped at the margin, drawn out and cut off It can be cut wide or narrow, according to the amount of iris grasped in the forceps The edges of the coloboma should be carefully dressed back into position If the conjunctival flap be small it is very well, but if large there is apt to be a portion that remains unattached after healing If the aqueous leaks out under this, it resembles chemosis This may heal slowly and give a high degree of astigmatism Dr Ziegler thinks that Dr Black's knife is useful, although not new In regard to the iris working over the edge of the knife he thinks that a little manipulative skill can generally make it float back If the knife be raised directly up keeping it on the same plane, the iris will slip right off He has never had occasion to use a supplementary knife In glaucoma where pressure throws the aqueous out the iris is most liable to prolapse over the knife

DR. A R BAKER, Cleveland, said that we all have to learn by experience Most ophthalmologists have tried the ripening operation and have abandoned it, and he thinks that when it is the general consensus of opinion that one operation is not so good as another there is probably some good reason for it

DR. C W HAWLEY, Chicago, said that he believes that in Chicago he was among the first to attempt cataract ripening He did the operation according to Beckman's instructions and was pleased with the results There was one case in which he lost the eye completely from panophthalmitis later but this was not due to the operation itself He had selected an old rheumatic man and, of course, that is a serious matter In every other case it was successful Dr Hawley takes a spatula and rubs it over the entire surface of the lens and in from four to six weeks he removed the cataract. He has now on hand a patient on whom he will perform ripening of one lens Both eyes are affected and it is necessary to do something to allow the man to continue his work He would not attempt to extract in the capsule As to iridotomy in cataract extraction he has tried once or twice a suggestion given to him by Dr Starkey Instead of doing an iridectomy he suggested making a partial incision at the pupil and removing a little button of the iris It takes away the tension of the iris at the pupil and leaves almost the entire iris for protection from light.

DR W B MARPLE, New York, in reference to inserting the knife upside down, stated that he remembers hearing Dr Knapp say that this had occurred to him twice and he had had no difficulty in revolving his knife 180 degrees On one occasion Dr Marple did the same thing and had no difficulty in turning the knife and finishing the operation He would prefer this to inserting a second knife

DR E E JACK, Boston, said that in the last few months he has done extraction in the capsule nine or ten times None of the cases have been failures, all have been fairly good, four or five very good One danger that has not been spoken of is that after the eyes are bandaged there is a great tendency of the iris to prolapse, there being practically nothing to keep the vitreous from bulging against the wound and making it gape This prolapse occurred in one or two of the cases One of these cases, he said, is worthy of especial mention, that of a man of fifty years of age with congenital cataract, never operated on A few weeks before Dr Jack had performed an iridectomy and massaged the anterior capsule without effect He then tried extraction in capsule which succeeded only after half an hour of patient work The result was good

DR R D GIBSON, Youngstown, Ohio, said that the irrigating fluid employed should be the physiologic saline solution When we speak of normal salt solution we should remember that it is eight times as strong as the physiologic saline solution He has found that internes sometimes make mistakes in this respect Dr Gibson stated that some time ago he wanted to irrigate the anterior chamber and did not have an irrigator with him and had to use an ordinary medicine dropper He drew out the point in the flame of an alcohol lamp and rounded it off

DR T J MCCOY, Los Angeles in reference to Dr Stevenson's paper, said that some weeks ago while doing an extraction, he grasped the iris midway between the limbus and peripheral margin and as he clipped it off he found that he had made a complete hole and had to reintroduce the forceps to get the sphincter He suggested that it should be grasped much nearer the pupillary margin

DR E E HOLT, Portland Me declared that, after all, the largest element in any operation is the operator himself and he must adopt that method which seems best adapted to himself and to each individual case In the preparation of the patient Dr Holt uses antiseptics about the eyes, nose, and face of the patient for several days before the operation, which he likes to have come off as quickly as possible He has given bromid of sodium and morphin to patients with great satisfaction He was led to the use of morphin as part of the preparation of a patient for cataract operations from an observation made about twenty years ago He had a patient who was addicted to the use of morphin She was unable to read ordinary type and led an unhappy life It was to change this condition of things that she had sought advice from several oculists, all of whom discouraged an operation on her eyes After careful preparation Dr Holt removed the cataractous lens from one eye without iridectomy There was no reaction from the operation Her ability to read again changed the whole aspect of her life He prefers to have the patient in the bed in which he is to remain after operation with the head of the bed made up at the foot so that he can stand behind the patient. He makes definite calculations to place the incision in the cornea so that the axis of the resulting astigmatism of the cornea will be exactly horizontal as thereby he is sure that he gets better results from the manipulations necessary to remove the lens at

the time of the operation, and also better visual results for the patient He seldom does an iridectomy, for he believes that the less traumatism inflicted, other things being equal, the better it will be for all concerned After he has completed the incision in the cornea he aims to open the capsule of the lens by a curved incision near its periphery, following the outline of the margin of the pupil He then removes the fixation forceps, leaving the eye free It is of the highest importance for the operator so to place his spatula on the cornea in an eye without iridectomy, that the first movement of the lens will be to tilt it forward, so that it will clear the upper margin of the iris and its upper edge come forward into the anterior chamber of the eye By so doing, the lens will come out readily and there will be little need of irrigating the eye after the expulsion of the lens Years ago he used irrigation a good deal, but by studying the causes which necessitated its use and removing them, he seldom finds it necessary to use irrigation after a cataract operation He also practiced the operation of ripening cataract and preliminary iridectomy, but now seldom does either

DR. MARK D STEVENSON, Akron, Ohio, said that the eye sac is cleansed more easily, better, and with less discomfort to the patient, by means of an eye bath and a sterile, unirritating solution than by any other method Dr Stevenson prefers to have very simple anesthesia and has not seen any harm result from 4, 5 and 6 installations of 4 per cent cocain and 1 or 2 of adrenalin chlorid After making the section and turning the flap back on the cornea, he often places another drop of cocain on the wound before touching the iris If the corneal dome should sink, irrigate. If the iris is grasped a little beyond the middle of its anterior surface and sufficiently withdrawn so that its pupillary margin lies just outside the wound, there is no danger of making a buttonhole in it which would later have to be connected with the pupil, as in Dr Verhoeff's operation The method of seizing and cutting the iris is the simplest possible and requires little time No iris tissue is removed, so that no care need be exercised as to how much, which must be carefully watched on other operations It would seem best not to remove any of the sphincter, as it helps to hold the iris tissue from prolapsing, even when divided, especially if eserin is employed The buttonhole operation requires great care and nicety not to remove too much iris at the base, which is apt to be torn while withdrawing it In attempting to unite this buttonhole to the pupil, two blades of a pair of scissors would have to be passed on either side of the iris tissue, one blade through the buttonhole and then between the iris and lens on which it lies (into the anterior capsule of which it is liable to pierce, if sharp and possibly to dislocate the lens) to beyond the pupillary margin, the other blade in the anterior chamber between the iris and cornea, the junction of the blades lying vertically nearly in the corneal section, widely opening it

DR F H VERHOEFF, Boston, referring to the fact that Dr Greenwood took exception to his statement that this operation offers the advantages of both the simple and the combined operations without their disadvantages, stated that these terms however, are purely relative and he thinks his further statements show that he does not claim too much for the operation If blunt pointed scissors are used there is little danger of injuring Descemet s membrane In fact, it is not necessary for the scissors to come in contact with the membrane. As to pain, there is no pain connected with the operation As to Dr Greenwood s statement that a small iridectomy would be better, Dr Verhoeff thinks it might be almost as satisfactory if one could always get an ideal iridectomy, but this is largely a matter of luck An iridectomy lacks the precision of this operation He has found the operation useful in extracting the lens in capsule cases of immature cataract

Arsenic in Phthisis.—Dr George F Butler (*Chicago Medical Recorder*) states that in certain forms of pulmonary tuberculosis arsenic is superior to any other remedy It is useful, however, only in conditions characterized by excessive expectoration and a slow degenerative process It is contraindicated when the cough is harsh and paroxysmal, with scanty expectoration and a tendency to hemorrhage

THE PRINCIPLES AND MECHANICS OF ABDOMINAL DRAINAGE *

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Two notably scientific papers have been published in this country which have dealt somewhat with this phase of the subject of abdominal drainage One was published by Dr John G Clark[1] and the other by Dr John L Yates[2] Many other papers on the subject have been published, but these cover most of the ground and furnish us with all the fundamental principles so far developed either by original work or reference to the work of others

Clark demonstrated that fluids and solids may pass through the endothelial layer of the peritoneum, fluids in many places, the solid particles only through the spaces of the diaphragm He found the diaphragmatic portion of the peritoneum capable of absorbing much gross material He found, too, by autopsy and on the living patient that the drainage tract, no matter what material was used, always contained organisms of some kind He also proved that there was frequently fluid

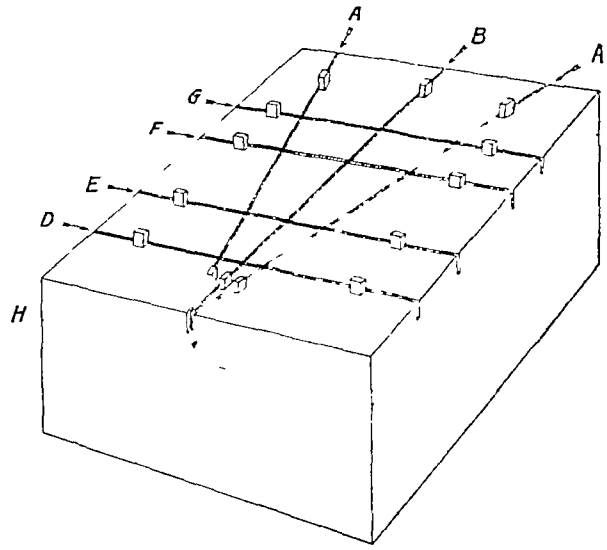

Fig 1.—Plaster block containing cast of abdomen A A right and left drainage lines B median section G through upper end of kidney F through lower end of kidney F through appendix H horizontal section

pent up in the drainage cavity which was sometimes forced into the general cavity, producing peritonitis, and that in many cases in which drainage was used, a sinus persisted six months and more

Basing his reasoning on these facts, he condemns external peritoneal drainage in most cases and advocates postural drainage into the lymphatic system by elevating the foot of the bed twenty degrees, thus throwing the fluid against the diaphragm where it may be absorbed by the large open lymphatics

Yates, in his article on "Local Effects of Peritoneal Drainage" confirms the findings of previous investigators and makes the results more definite by his experiments The experiments were with all forms of

* The technical methods of drainage have been purposely omitted.

* Read before the Western Surgical and Gynecological Society Salt Lake City Aug 31 1906

1 Jour of Obstet. and Dis of Women and Children April and May 1897

2 Surg Gyn and Obst [illegible]

drainage, and by using many dogs he was able to definitely determine the time at which drainage from the peritoneal cavity ceases. By placing different forms of drains in the flanks of dogs and then in a certain number of hours filling the abdomen through an opening at the ensiform cartilage with carmine solution, he was able to determine definitely that all forms of drains were closed, so that absolutely no drainage from the peritoneal cavity would take place after six hours.

By quotations from many investigators and experiments of his own he concludes that drainage produces a flow of serum (lasting from a few hours to two days), which in quantity is out of all proportion to the fluid in the cavity to be drained, but in exact proportion to the amount of drainage material inserted, showing that the serum was poured out as a result of the irritation produced by the drains. From the work of other investigators and confirmed by his own experiments, he finds that gauze will not drain pus or blood.

Fig. 2.—Diagonal section through pelvis and right flank at base of appendix (shown by black space). A, liver. B, gall bladder. C, appendix. D, psoas muscle. E, pubic bone.

Acting on these facts he also condemns drainage of the peritoneum, as a rule, on the grounds, (1) that it is impossible, (2), that it is depleting, and (3), that pus and blood are not drained.

I believe that the scientific findings of Clark and Yates are correct and fundamental as far as they go, but should be studied in connection with other mechanical principles. The two mechanical principles involved in peritoneal drainage are gravity and capillarity. The two steps in the process of drainage are, first, bringing the fluid in contact with the drain, second, delivery of the fluid to the surface. Gravity performs the first step in all intraperitoneal drainage and, when postural methods are applicable, may also be made to perform the second. When the point of delivery is higher than the lowest point in the cavity to be drained, capillarity is necessary.

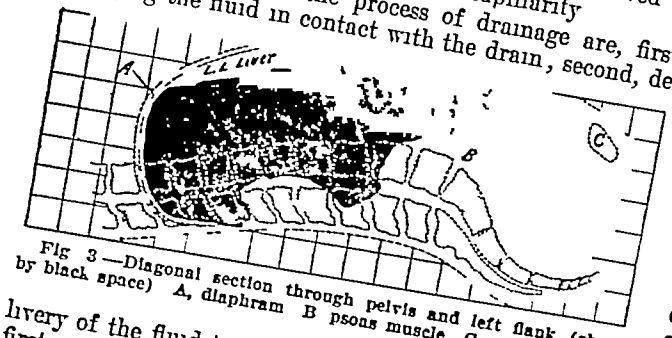

Fig. 3.—Diagonal section through pelvis and left flank (shown by black space). A, diaphram. B, psoas muscle. C, pubic bone.

Gravity drainage may be executed by means of a tube or any other agent that will maintain a patulous opening. A tube does not always completely drain owing to the sucking into its opening of intestines and omentum, as shown by Mikulicz. Two or more parallel tubes bound together, work better for in this way both capillarity and tubular drainage is brought to bear, making it more difficult to block. Capillary drainage is usually carried out by means of gauze which may or may not be encased in some smooth tube or tissue.

By experiment it is found that ten gauze wicks will drain exactly ten times as fast as one over the edge of a basin or out of a cavity. Therefore drainage will be in exact proportion to the amount of gauze passing through the external wound. In draining water over the edge of a basin the flow ceases when the water reaches the level of the outside end of the gauze but starts again if a piece of gauze is pinned to the end of the drain and flows with a rapidity proportionate to the length of the external gauze below the level of the fluid in the basin, thus acting on the principle of a siphon. Gauze drainage must therefore be brought in contact with dressings or other absorbent substance if drainage is to be effectual. The same applies when the gauze is encased in that the end of the gauze must be in contact with dressings.

My findings, both experimentally and clinically, confirm the conclusion of Yates and others that gauze will not drain pus or blood from a basin, nor from a closed abscess cavity. It will, however, drain either pus or blood from the free peritoneal cavity. Even coagulated blood or thick pus is liquefied by the excessive flow of serum (noted by Yates as being useless and depleting) and is delivered to the surface in the form of a thin red non-coagulable fluid in the case of blood, and a yellow fluid in the case of pus, which will frequently saturate

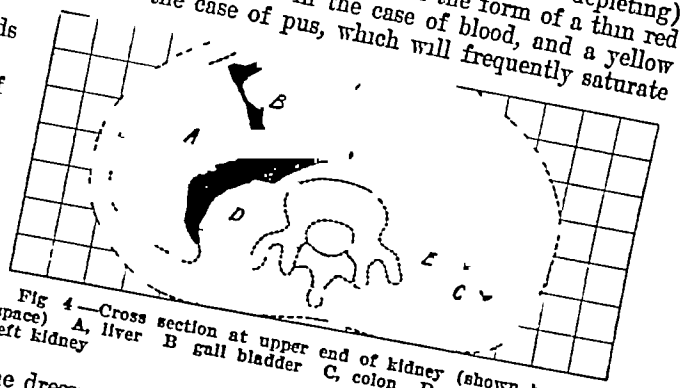

Fig. 4.—Cross section at upper end of kidney (shown by black space). A, liver. B, gall bladder. C, colon. D, right kidney. E, left kidney.

the dressings and all the bedding in a short time, if the drainage is sufficient in quantity and properly placed. Thus this seemingly useless flow of fluid serves the purpose of a solvent, and at the same time acts as an irrigator from within, out, in a manner impossible by artificial irrigation. Gauze packed in a cavity like the "folds of a fan" as described by Clark, creates a flow of serum in proportion to the amount of gauze in the abdominal cavity, but serum is delivered to the surface only in proportion to the size of the strip passing out through the wound. Hence the large secretion of serum, and later of pus, surrounding the drain (mentioned by Clark), which was not delivered because of the insufficient drainage at the outlet and which later produced a chronic fistula because the internal cavity was larger than its outlet. This is aptly illustrated by the formation of a fistula following the improper opening and subsequent treatment of an ischiorectal abscess.

Gauze forms a splendid frame work in the formation of a protecting wall and an effective drain when in large enough quantities to prevent its being choked by granulations from the sides of the wound. Any attempt to remove gauze prior to the fifth or sixth day is dangerous, as shown by Clark, who reported eight out of one hundred cases in which intestines were drawn out through the wound and others in which walls were

broken down so that infection occurred Force should never be used in the removal of gauze, as it will almost always be loosened from the sixth to the fourteenth day by natural processes By this time a definite wall is formed and there is no danger of breaking open the cavity Much of this difficulty is relieved by covering the gauze with protective tissue or split rubber tubes One of the most effective and popular drains is in the use of a number of split tubes or cigarette drains side by side, thus producing a double capillary action.

The postural drainage advised by Clark is effective, even to the danger point, as is shown by the enormous number of tube casts thrown off in a septic case following the rupture of an appendiceal abscess into the right flank, indicating an overwhelming of the kidney The modern tendency is to remove the fluid as far from the diaphragm as is possible in order to avoid the very thing that Clark was trying to accomplish Fowler therefore recommended the elevation of the head of the bed from eight to fourteen inches to drain the fluids into the pelvis Kelley recommends elevation of the body to an angle of thirty degrees for the Fowler position Others have recommended still more elevation of the upper extremities

I was early struck with the fact that either flank holds more fluid than the pelvis when the subject is lying perfectly level on the back I experimented with several cadavers containing all the abdominal viscera and found that in order to drain the fluid from the flanks into the

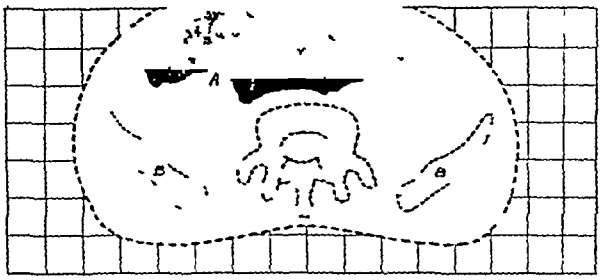

Fig 5—Cross section at base of appendix (shown by black space), A, appendix B B ilium

pelvis, the body must be elevated to an angle of sixty or seventy degrees, instead of thirty, but I was unable to determine accurately the degree necessary for drainage

I took, therefore, the body of a man who had died of pneumonia, weighing about 140 pounds, height five feet eight inches, and removed the front of the abdominal wall I then removed the stomach and all the intestines except the cecum and the appendix The liver, gall bladder, kidneys, ureter and bladder were left and a string was pinned along the course of the ureter so as to make it prominent in the plaster cast The body was made perfectly level and the cavity was filled with a liquid plaster-of-Paris so that it made a smooth, level surface. Two days later the body was cut off from the cast, the cast dried and painted with iodin to give it color, and covered with several coats of shellac to make a line of cleavage The flat or abdominal side of the cast was then placed on the bottom of a box so that the highest points of the cast were represented by the deepest points in the flanks and an inch of liquid plaster-of-Paris was poured in around the cast, at which time the stakes shown in Figure 1 were set to mark the lines for sawing, after the cast had dried On the right side, a line was made which would pass through the deepest points of the flanks pass through the base of the appendix, and through the pelvis A corresponding line was made on the left side, a cross line was made to pass through the appendix transversely, and another through the upper poles of the kidney, and still another through the lower poles of the kidney The box was then filled with plaster, making a block 7x16x18 inches This was dried, and when it was dry I sawed through each line. As each section was made, a draftsman was present to make an accurate tracing of the cavity, which is shown in the pictures in solid black The plaster is checked off in spaces of one inch for the purpose of estimating angles By these pictures it will be seen that with the subject on its back the flanks are more than one inch deeper than the pelvis, and that in order to bring the lowest point in the flank on a level with the psoas muscle, which forms the dividing line between the flank and the pelvis, the upper end must be elevated to an angle of fifty-one degrees, and, in order to drain properly, it would probably have to be raised to an angle of sixty to seventy degrees To drain the contents of the pelvis into the flanks for the

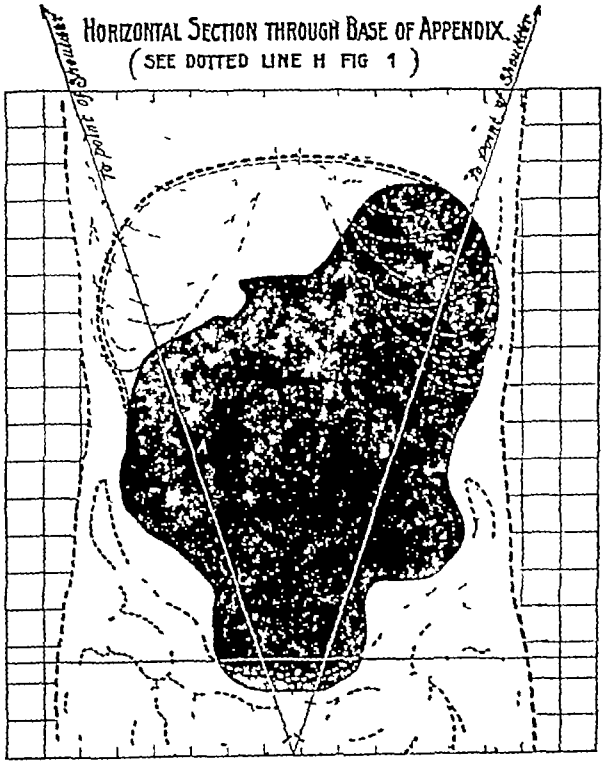

Fig 6—Horizontal section through base of appendix (see dotted line H Fig 1) A, right drainage line B left drainage line C, location of appendix.

production of Clark's postural drainage, the patient's feet would have to be raised very high

In Figure 6 we see that by turning the patient in a lateral position almost all the cavities may be drained For instance, in the case of appendicitis, the entire peritoneal cavity may be drained perfectly by placing one drain in the pelvis and the other in the flank and having them passed out through ordinary incision for appendicitis the patient is turned on the right side This is the position which I use in most cases of drainage for appendicitis If the infection is confined to any one of the cavities, the drainage would then be placed and the position utilized to suit the case in hand—for instance, if one flank alone is involved, the drainage sho laced at the most dependent part of the cavit be drained In addition to the experim one

by many experimenters and investigators and brought out especially by Clark and Yates, proving that drainage is immediately walled off, I wish to add the report of four clinical cases

In Figure 7 is illustrated a case of appendicitis with diffused peritonitis in which the drain worked successfully locally and was as usual walled off by the intestines, but owing to gravity, some of the infective material flowed into the space between the kidney and the liver and an abscess was formed outside of the wall, entirely distinct. This condition was found postmortem

In Figure 8 is seen an appendiceal abscess, filling the entire right flank and side of the abdomen, which was opened and successfully drained, the wall was already intact and was not disturbed Five days later another

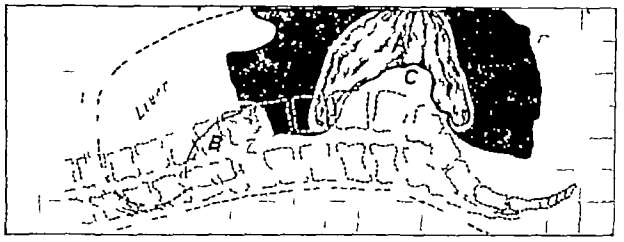

Fig 7.—A appendiceal abscess successfully drained B separate reno-hepatic abscess found postmortem, C, appendix.

abscess, entirely distinct and separated by the intestines from the original one, was found, and opened It was evident that part of the original infection from the ruptured appendix dropped over the divide into the pelvis, while most of it went into the right flank Nature quickly threw up a wall around the appendix and the upper abscess and thus kept away from the drainage tract the infection that had fallen over the brim of the pelvis

Figure 9 shows drainage of an acute ruptured appendiceal abscess in which the patient had rolled from side to side prior to the operation The patient died five days after the operation and a perfect wall had formed

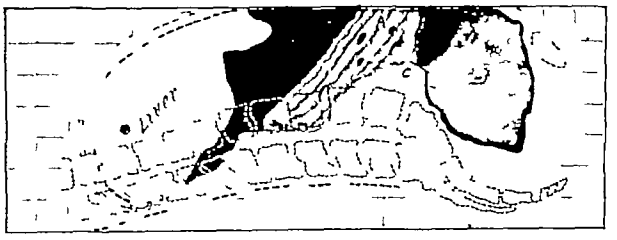

Fig 8.—A, appendiceal abscess successfully drained B separate abscess discovered six days later C appendix.

around the drain, the intestines had closed in, solidly, and seemed to be in a healthy condition, but an extensive accumulation had taken place in the left flank Part of the infective material, after the rupture, had, by the movements of the patient, been gravitated into the left flank, the intestines filled in around the drains, thus shutting off and segregating the second focus of infection

Figure 10 represents an acute pyosalpinx, with large abscess, tubes removed and cul-de-sac drainage applied, which worked beautifully leaving a healthy tract. Four weeks later it was necessary to open a large abscess which apparently started from the vesico-uterine space. The intestines and omentum had filled in around the drain, attaching to the surface and fundus of the uterus, and had segregated a portion of the infection which had fallen over the divide into this space at the time of the operation

Thus it seems that *On the insertion of a foreign body into the peritoneal cavity, intestines and omentum attach to it and to each other, forming a complete wall in a few hours This wall is just as effective in keeping a focus of infection, which has been separated from the drain by gravity, away from the drain, as it is in keeping the field which is being drained from infecting the general peritoneal cavity*

DEDUCTIONS

1 Fluids are rapidly absorbed by all parts of the peritoneum crude or granular matter is absorbed only through the lymph spaces at the diaphragm (Clark)

2 A drainage tract always contains microorganisms (Clark)

3 Any form of drain is isolated from the free peritoneal cavity in a few hours (Yates)

4 A drain causes a flow of serum, by mechanical irritation, which is profuse in proportion to the amount of drainage material in contact with peritoneum (Yates)

5 This flow is delivered to the surface only in proportion to the amount of drainage passing out through the wound (Experiment)

6 Serum and pus accumulate around drainage only

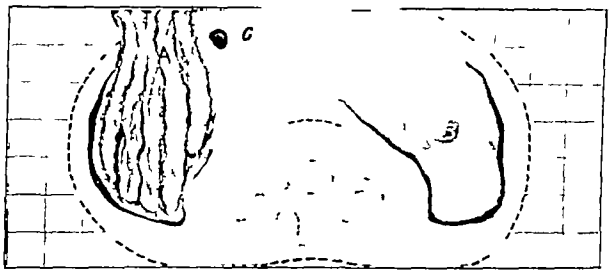

Fig. 9.—A successful drainage of right flank, B, post-operative abscess in left flank, C tip of gall bladder

when the drainage at the outlet is less in amount than that contained inside or when drainage is too small (Experiment and clinical observation)

7 Blood and pus in quantity are never found in the neighborhood of a properly applied drain after forty-eight hours (Clinical observation.)

8 The flow of serum resulting from the irritation of a drain in the free peritoneal cavity dissolves blood clots and thick pus, leaving gauze drainage clean and white by the time the flow ceases (Experiment and clinical observation)

9 Drainage placed within a walled abscess cavity does not excite a flow of serum, therefore blood and pus are not drained from formed abscess cavities by capillary action (Experiment and clinical observation)

10 Small gauze drains are likely to be choked at the exit unless covered by a tube or protective (Clinical observation)

11 Extensive gauze drains are not thus affected and act in proportion to the amount coming through the opening, but will only drain when it is in contact with dressing or clothing, or when its outside end is at a lower level than the depth of the cavity to be drained (Experiment and clinical observation)

12 A tubular drain drains perfectly a walled cavity or will drain the peritoneal cavity under the influence of

gravity if it does not become choked, but will not drain up hill, except when the fluid is confined (Experiment and clinical observation)

13 A single tube is much more likely to be choked by intestines and omentum than two or more parallel tubes (Clinical observation)

14 There are three cavities or basins of the peritoneum to be drained, the right and left flanks, separated from each other by the spinal column, and the pelvis, separated from the flanks by the psoas muscles Either flank holds more fluid and is an inch deeper than the pelvis and its bottom is more than four inches below the top of the divide made by the psoas muscle on which the appendix rests The body must be elevated to an angle of fifty-one degrees to bring the bottom of the flank on a level with the divide, and to an angle of sixty or seventy degrees to properly drain by the Fowler position The entire abdominal cavity can be drained by a lateral position

A line drawn from the center of the surface of the perineum to the tip of the shoulder will pass through the deepest part of the pelvis and flank I have called these lines the right and left drainage lines (Fig 6)

There are no independent cavities or basins between these lines As it is a well-known clinical fact that drainage should always be in contact with the parietal peritoneum on at least one side I make it a general rule that drainage should never be placed between these drainage lines except just above the pubic bones The

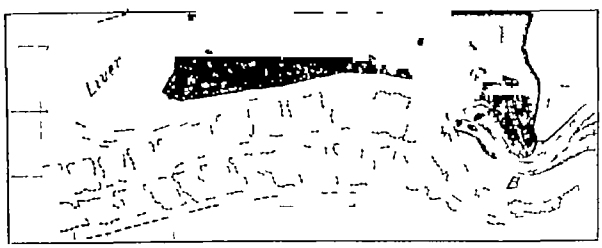

Fig 10—A abscess developing in vesico uteral space after successful cul de-sac drainage (B)

deepest points of the flanks are best drained external to these lines (cadaver and plaster cast)

CONCLUSIONS

1 Gravity is the most important principle in peritoneal drainage therefore drainage must reach the most dependent point of the cavity to be drained The patient must be placed in the position that would naturally cause the fluids in the peritoneal cavity to gravitate to the drain, always bearing in mind the anatomy of the three anatomical cavities or basins

2 Gauze or capillary drainage is the most widely applicable and useful of all drains if used in sufficient quantity to preclude its being choked by débris and provided the drain is as large in circumference at its exit as it is at any point within the cavity, and provided it is in contact with abundance of dressings on the outside

3 Gauze drainage is a very dangerous agent if all the foregoing principles are not kept in mind in its application

4 If a surgeon remembers that his drain ceases to be effective in a few hours, he places it with the idea of removing septic fluid in the shortest time possible according to the principles of drainage, and usually gets results

5 If he is deluded by the belief that his drainage will continue to work for days and that fluid will run up hill to get to the drain, he will usually place his drain accordingly, and is consequently disappointed in drainage

6 If a surgeon habitually removes gauze drainage before it is loosened by the natural process, a large per cent of his cases will have secondary sepsis post operative obstruction or post operative hernia

7 Drainage (except a small precautionary cigarette or tubular drain) can rarely be safely removed until the fifth or sixth day—many times are best left till the end of 2 or 3 weeks

8 Capillary drainage is inefficient for draining defined abscess cavities

9 Tubular drainage is appropriate for defined abscess cavities, but is an uncertain drain in the free peritoneal cavity except when aided by gravity

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PROBLEMS AND DUTIES IN RELATION TO MALARIA

WILLIAM KRAUSS, M.D
MEMPHIS, TENN

While doing such missionary work as I have been able on the subject of fevers, I have frequently heard the argument that with the eradication of malaria the medical profession in the country districts would be, like Othello without an occupation I do not charge any member of the profession with such narrowness and fallacious logic, I think rather, that we have been slow in taking hold of the prophylaxis of malaria chiefly because it involved unsolved problems and not because we thought it would injure our business

The business of practicing medicine depends for its success on the prosperity of the community and no sickly community can be expected to prosper Medical orators are wont to tell us that we belong to the only profession whose disciples labor to their own undoing in promoting public health work, but here are the facts Some of the patients who come to our hospitals tell us the country doctors treat all diseases with huge doses of calomel and quinin and that they, the patients, do not intend to remain in such a country any longer if they have to be in a state of chronic salivation to exist Planters and plantation managers say they expect to remain only until they have made a "stake" and will then leave for a large city

The fact is that to-day no region should be uninhabitable on account of malaria and indeed much of the so-called malaria is something else The report of the United States Census for 1900 shows in the "South Mississippi belt" a death rate per 1,000 deaths from all causes, of 88 8 from malaria, and an actual increase of ratio since 1890 In Memphis the death rate per 1 000 deaths for 1905 was 92 1, while in one hospital the rate was 107 per 1 000 There were 2 487 total admissions of which 414 were for malaria with 16 deaths giving a malaria mortality of 3 8 per cent or 10 7 per cent of all deaths in the hospital

As a matter of fact this great malaria mortality is largely a matter of erroneous diagnosis It shows that parallel with this problem of malaria prophylaxis from an economic viewpoint is the question of diagnosis of obscure disorders because it is inferred that the state of nosologic knowledge of the intelligent patient reflects that of his physician 'If malaria' is still believed by so

of ill health Patients come to me from the lowlands and the country surrounding Memphis and say that they have been out of sorts all the year and that they have been exposed to miasmatic influences so long that they know they are "just full of malaria." In most instances this is not the case I have seen tuberculosis, sepsis, gall bladder disease, liver abscess, dysentery, uncinariasis, chronic nephritis and visceral malignant disease, in persons who come telling me the same tale of "malaria in the system" They may have taken calomel, or quinin, or some quack chill tonic, or, perhaps they have not taken anything in a long time and for this reason know they need something "to get the malaria out of the system"

Now, nothing is more amenable to proper treatment than malarial fever, and a recent infection is almost never anything but a fever The sequelæ, the malaise, the cachexia, "biliousness," indisposition, etc, are never the result of an attack of malarial fever *per se* All practitioners know that in the spring malarias are paroxysmal and, as the season advances, the recovery from an attack becomes less and less complete We know that, as a rule, the physician does not get many cases of paludism to treat until mid-summer and that the condition becomes worse and the anemia more pronounced as the season advances In the spring a patient can take his quinin "straight" and fare well, but toward the end of the season an ill-timed dose of quinin may produce grave consequences

WHAT IS MALARIA?

Thayer, in the most magnificent work on malaria ever presented to the American physician, tells us that malaria is only fever, more or less paroxysmal, divisible into three main varieties, each caused by a blood parasite He tells us to let our patients sit in the sun and the chapter on treatment goes into great detail of the relative merits of the different cinchona alkaloids and their salts Who would advise a "swamper" to sit in the sun or to take quinin without preliminary treatment? Is it then that we have a different brand of malaria in Memphis from that in the hospitals in Baltimore?

I have devoted 15 years to the study of this alleged difference and to the question What is malaria? I answer that in the beginning it is an infection of the blood by one or more groups of one or more varieties of blood parasites whose life function in the body is the destruction of hemoglobin The sporulation, more correctly, segmentation, of these parasites initiates the train of symptoms, viz, chill, fever and sweat, with the well-known clinical modifications Logically, each particular segmentation would be expected to cause the multiplication of this infection from 8 to 20 fold or more We know that this does not happen and that frequently, after a few paroxysms, the chills, and later, the fever, disappear without specific treatment We also know that each subsequent paroxysm results in a smaller and smaller reduction in the number of erythrocytes and amount of hemoglobin Two things evidently happen 1 A resistance to the infection is developed 2 The blood-making function is stimulated to a point at which it more than keeps pace with the blood destruction Hyperplasia takes place in the spleen, liver and kidneys, and gradually the way is paved for the condition which is called probably erroneously, chronic malaria But we have no trustworthy evidence that any particular group of parasites from a single infection can undergo many short cycles i e, to segmentation except the quartan which is relatively rare After a number of segmentations, conjugation is supposed to occur and the parasite goes into the long cycle, i e, forms so-called resting bodies or gametes and gametocytes, which is the stage necessary for the beginning of the mosquito cycle or development into sporozoites This so-called resting stage is the end-stage, so far as this particular infection of the patient is concerned, others of the same brood may persist in the active form but the associated symptoms call for treatment which eradicates them

In the estivoautumnal fevers this long cycle may begin a few days after the first paroxysm, though usually, somewhat later We know little about the life history of the malaria parasite in the spleen and bone marrow, possibly conditions there favor many repetitions of the short cycle, but it is significant that if such patients as are said to have chronic malaria are removed from further infections they soon recover, showing, as a rule, a developed property of self-immunization, rather than a chronic infection Occasionally, it is true, we observe patients with recidiva long after such removal It is also a common observation that the "cure" is ushered in by a critical paroxysm, due to disturbed symbiosis

WHAT IS CHRONIC MALARIA?

For these reasons I believe that chronic malaria is a state of relative immunity during which repeated infections produce relatively insignificant reactions We have a state of symbiosis in which the immunizing contest between the parasite and the blood cells and blood-making organs is in a state of equilibrium This is the larvate malaria occasionally associated with symptoms simulating other diseases but more usually developing into paroxysms under the influence of shock, surgical or otherwise, the puerperal state, "taking cold," sudden change of environment, acute indigestion, etc This is the "bad-drinking-water malaria" of the adherents of the hydric theory of transmission, which, until recently held much sway Chronic malaria becomes acute more often through reinfection than in consequence of outside influences, though these may shorten the period of incubation. Under this hypothesis the merozoites resulting from segmentation do not invade new cells but hibernate somewhere in the interior and become active when reinforced by a new infection or die when the patient moves to a non-malarial climate, but they do not, *per se*, produce any paroxysms Under frequent reinfections the patient becomes "bilious" to a marked degree, he fears to take quinin because he fears hematuria, he takes calomel, chill tonic liver pills, anything except quinin *

As to the hemoglobinuria, Osler's "Practice," latest edition, says "There is no question as to the malarial nature of this disease, but whether there is a special malarial parasite is not yet settled"

Quoting Thayer, he says "There is little evidence to show that the malarial hemoglobinuria of the southern states is due to quinin"

In direct contradiction to this statement, I make the following assertion In such cases (of chronic malaria without paroxysms or marked cachexia), quinin without a preliminary purge or a saline to restore the tonicity of the blood, produces symptoms of intoxication and sometimes hemoglobinuria not necessarily quinin, but any factor disturbing symbiosis, as "taking cold;" the majority, however, give a quinin history, the prolonged malarial infection being a necessary antecedent

* Schaudinn announces that he has observed a parthenogenesis of female gametes, e g a reversion and segmentation of these "resting" bodies. This revives a belief long since abandoned at any rate this is relapsing not chronic malaria.

TREATMENT

What, then, are we to do in such cases? We are only considering therapy in so far as it has a bearing on the eradication of the endemic If such a patient is put to bed and placed under the best hygienic conditions, given eliminatives, followed by arsenic, and the malarial leucocyte variation disappears, he may be considered as cured If hemamebæ appear in the peripheral circulation during this time, tentative doses of quinin may be given to try the hemolytic reaction and then larger doses until a cure is effected The time to give quinin, and the only time, is when developing parasites are found in the peripheral blood, provided, further, that the infection is fresh, as evidenced by a characteristic fever curve, otherwise a preliminary purge is absolutely demanded It is not necessary to salivate your patients or to give calomel to all of them In the autumn it is my routine practice, so far as I employ routine, to give two or three 10 or 15-gram doses of sodium thiosulphate at desirable intervals until the bowels are freely emptied Pernicious cases must, of course, be treated more expeditiously and if acute perniciousness supervenes on chronicity, it is better to take chances with intravenous medication, there is slight probability of the patient recovering in any event

If acute paroxysmal malarias are properly handled with a persistent follow-up treatment, such a condition can not develop, and the most prolific source of the season's infection is definitely eradicated The prophylaxis of malaria and its definite local eradication depends alone on the complete cure of our malarial fevers The small percentage of natives who do not have paroxysms or distinct evidences of the infection should have their blood examined occasionally Two objections are urged against this plan 1 The patient will object on the ground of expense and impracticability 2 There are few skilled microscopists in the country

As an economical proposition, bearing in mind that each malarial paroxysm adds to the sum of pathologic changes, more or less permanent, and that many disorders, progressively fatal, are mistaken in the beginning as "just a touch of malaria," is it cheaper to spend weeks and months vainly trying to regain health, or to have oneself looked over from time to time?

As to the second objection, 30 years ago it would have been regarded as the height of extravagance for a business house to employ a stenographer, to-day, it is a small concern that does not require a number of them, to day there are laparotomists in the country, telephones, electric light, waterworks and trolley cars, and as soon as practitioners learn to appreciate the necessity for skilled microscopists they will have them also Almost every patient with malaria in my charity service during the last quarter (July to October 1906) had his blood examined before the treatment was begun, the temporary illness of an assistant is the only excuse for the "almost" We had one death in this service, a man brought in comatose, who died within two hours In looking over the annual reports of a local hospital I find the following classification

Various forms of malaria, 877 cases 15 deaths.

The following is but little better

	Cases.		Cases
Estivoautumnal	95	Pernicious	6
Intermittent	24	Toxemia	4
Remittent	21	Tertian	264

In this list some visiting physicians made an attempt to classify their fevers properly, and the others did haphazard guesswork Among these I found, at random two cases of the quartan type, one being associated with the estivoautumnal type Here there were 16 deaths

If it is borne in mind that of all fevers, malarial is the most tractable, what excuse have we to offer for a hospital death rate of from 2 to 6 per cent.? And if we bear in mind that the disease is absolutely preventable how can we complacently look on a ratio of 11 per cent to the total number of deaths?

I hold that such a state of affairs is absolutely unjustifiable, but the worst is yet to come It is safe to assert that not one of these patients has been instructed in the matter of his responsibility to his fellow man in respect to harboring malarial organisms

CONCLUSION

1 There is not the shadow of an excuse for failure to make an exact diagnosis in all fever cases

2 The blood of residents of malarious localities should be examined at frequent intervals This does not constitute an encroachment on personal liberty that can weigh a feather's weight as compared with vaccination

3 Fever cases should be treated in accordance with the findings of a thorough blood examination, with especial reference to time of dosage and to the complete immunization of the individual for the sake of his neighbors

4 Quinin judiciously used in accordance with findings of a blood examination very rarely does harm, its prohibition on the ground of possibly precipitating a hemoglobinuria is unpardonable, its administration during hemoglobinuria is very dangerous and usually unnecessary, a blood examination will save such patients from almost certain death

5 The screening of houses and the destruction of breeding places of anopheles should be encouraged so far as possible, but the prophylaxis of malaria and its definite local eradication depends on the destruction of the parasite within its alternative host, man

Clinical Notes

THE PRETUBERCULAR STAGE OF PULMONARY TUBERCULOSIS

CHARLES FRANCIS BELSON M D
ROSWELL, N M

Though the symptoms in the pretubercular stage of pulmonary tuberculosis are extremely uncertain, there are many cases in which, if properly conducted, the patients may recover with scarcely the knowledge that they were affected with the dread disease

Pulmonary tuberculosis is a disease, the incipiency of which is of necessity slow, but which after a time, may either become rapid, or continue in a chronic progressive course covering a considerable period of time The majority of primary infections gain entry through the respiratory tract, and study of the physiology of respiration and of the histology of the lung will convince one of the difficulties which beset the entrance and lodgment of the bacillus and should demonstrate to the most skeptical that in all probability one germ only, or at most a single isolated colony primarily reaches the termini of the ciliated tubes the entrance to the unprotected walls of the alveoli

It requires from three to six weeks for the first tubercle to form, this tubercle must break down and infiltrate its

microscopic neighborhood, which in turn must pass through the same cycle of development, finally reaching by extension a state of magnitude sufficient to alter the local structures and systemic functions Knowing this, we can appreciate the words of Professor Cornet of Berlin, when he says that the very earliest period at which physical signs become known to us is from six months to one and a half years after the implantation of the germ

I desire to call attention to an early if not a primary period in the development of this disease—one of latency which merges insensibly from a state of health into one of recognized disease

The phthisical habit is to be recognized in a person who is tall delicately built, with oval face, clear skin, blue eyes, long eye lashes drooping shoulders, winged scapulæ, sunken chest, prominent clavicles and with ribs markedly slanting from behind forward, thin hands with in-curved nails An almost opposite condition, viz the dark-skinned, raw-boned, thick-lipped type, has been associated with this disease In all probability this is the result of a disproportioned make-up of the vital organs and a disturbance of that equilibrium which should exist between them, perhaps an arrested development in some of them Sooner or later such an individual may fall a victim to this disease

In such a person the chest measurements will be found to be less than 35 inches By dividing the number of pounds weight by the number of feet in height we will have in the result the so-called corpulence, and if the result falls below 21 it is very inauspicious Often there is an undersized heart, with a relatively lessened arterial blood pressure The skin of the body may be marble white in contrast with the color of the hands and face, and often a brown pigmentation, the so-called liver spots, may be seen

A close observer may note that the eyes are too bright and that perhaps one pupil is larger than its fellow at times, due to irritation of the ciliary nerve through the cervical sympathetic from slight changes in one apex The lips may show a bluish tinge from deficient oxygenation or the margin of the gums show an unusual redness, one cheek will often show a transient blush The hair becomes brittle and the mustache droopy Appetite is variable and uncertain, a vague nausea at the sight of food being often present, and at meals the patient pushes aside the meat, nibbles at it or avoids it altogether Decided variations in appearance may be noticeable from day to day, more especially with the changes in the weather, the weight may fluctuate, or there may be a gradual loss thereof, the flesh becoming flabby

The patient fatigues easily, becomes tired and languid as evening approaches, and breath seems shorter than formerly he can not do the work that he formerly could The temperature will be found to be subnormal in the morning, with or without an afternoon rise, the thermometer registering slowly, often requiring from five to ten minutes to reach a half degree Pains in the chest are not to be ignored They may radiate to the shoulder and arm of affected side, the angle of the scapula is a favorite site The patient clears his throat frequently, the voice is weak and often husky, and a single expiratory cough seems to relieve a vague irritation somewhere though a careful examination of the lungs may reveal no abnormal sounds A weakened respiratory murmur in one or both lungs would be suggestive and on full inspiration a rumbling noise is often heard at the end of the act as if the lung had been living dormant and were just opening up A single cough often follows this inspiration if deep

Careful inspection may reveal deficient expansion at one apex or the other, or the Litten shadow may not fall as it should Owing to the loss of the normal elasticity of the lung tissue from a slight condensation of the parenchyma at a certain point, the latter part of the expiratory effort becomes audible, producing a prolonged expiration nearly always at or near an apex The same changes would produce an impaired resonance at this point The percussing finger may produce a localized muscular spasm the so-called myoidema By placing the ear close to the open mouth of the patient, a fine crepitus is sometimes heard during expiration the laryngeal crepitus, sounding not unlike the scratching of a fine pen on paper

Sooner or later a slight hemorrhage or a protracted "cold" will startle the patient, and from this event the beginning of pulmonary tuberculosis is usually dated by the layman, and only too often by the physicians of the present day In reality this only means that either a congested tubercular area has leaked or that a tubercular focus has caseated and scattered, throwing toxins and bacilli into the surrounding tissues From the effects of this caseated material on the lung tissue there will soon be positive signs of an active inflammation extending much more widely, however, than the actual focus of the disease

In direct ratio to the virulence of the poison and the vulnerability of the tissues will be the ultimate course of the case whether it be phthisis florida or the chronic ulcerative form

TREATMENT OF INGROWING TOENAIL

GERALD B WEBB, M D
COLORADO SPRINGS, COLO

Some years ago I published[1] a method of treating ingrowing toenail by the use of silver wire. Latterly I have made a few changes in the technic which simplify the method for those who found difficulty in the mechanical adjustment of the wire Instead of the annealed silver wire of pin size, I now take surgeon's silver suture wire, No 26 (occasionally larger or smaller, depending on the case), and twist it, as shown in Figure 1, to get the effect of a piece of string This can now be easily manipulated to fit the toe without the need of pliers or artery forceps

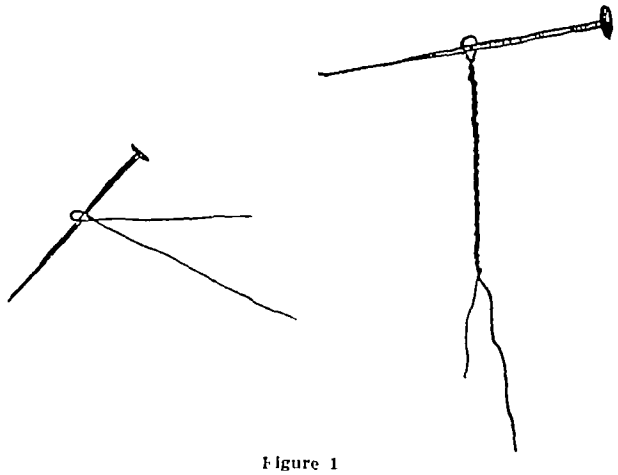

Figure 1

1 Medical News Dec 5 1899

Having molded it to fit accurately under the nail and around the edges, as in Figure 3, a piece of adhesive plaster is laid on the toe (Fig 2), the wire reapplied and kept in position by straps of adhesive plaster run around, as in Figure 4

The principle consists of two factors 1, mechanical, the replacing of the nail, often jagged, by a non-irritating, smooth substance, 2, chemical, the formation of the albuminate of silver by the contact of pus with the silver, thereby causing destruction of pus organisms

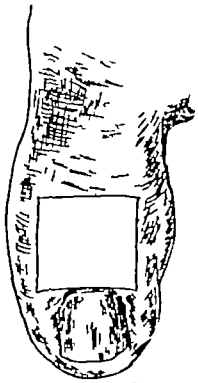

Figure 2.

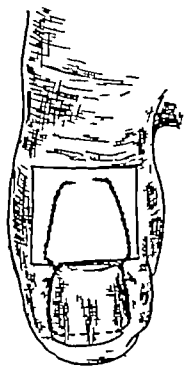

Figure 3

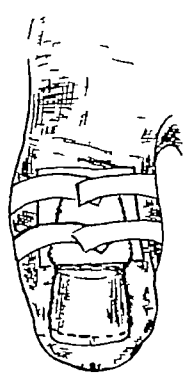

Figure 4

I usually advise patients to wear a boot which does not crowd the toes, and sometimes advise the application of a wedge of absorbent cotton between the big toe and the second toe. Patients can daily readjust the silver wire appliance themselves, and are instructed to wear it for ten days until the nail has had time to grow out. They are then advised as to the necessity, in future, of cutting the nail square across instead of rounding off too much of the sides

SUCCESSFUL RESECTION OF TWELVE FEET AND TWO INCHES OF THE ILIUM

IN CASE OF CRIMINAL ABORTION *

AXEL WERELIUS, M.D
CHICAGO

In a careful search of the records of cases of bowel resection I find no successful resection of a greater length than in the following case

Patient—A young woman, aged 20, seen May 20, 1906, in consultation with Dr M Meinhardt.

History—About six hours previously the patient had undergone an illegal operation, performed somewhere on the north side of the city On awakening from the anesthetic she was informed that she would have to undergo another operation She was then taken to the home of her affianced on the south side and Dr Meinhardt called He states that he found a large mass of intestines protruding from the vulva.

Examination—I found the patient in bed but, except for some pain in the lower abdomen and some nausea, she complained very little She was in the dorsal position, with the knees flexed Pulse 90, temperature 99 F, and respiration 20 The expression was somewhat anxious and there was some restlessness Heart and lungs were negative The lower abdominal zone was slightly tender and the corresponding parts of the recti were rigid An enormous length of the bowel minus its mesentery was seen escaping from the vulva

Operation—After a rapid examination the patient was immediately sent to St. Bernard's Hospital and prepared for operation The following were present at the operation Drs J P Webster, Belson Meinhardt and Quile An incision about three inches in length was made through the right rectus On opening the peritoneal cavity it was found to be partly filled with blood A large amount of the mesentery minus its bowel presented in the field. The disattached bowel was felt to escape through a rent in the left broad ligament into the uterus The hemorrhage present seemed to come mainly from the injured broad ligament and not, as one would suspect, from the mesentery, as this was torn closely from the intestine and included the serosa On account of some oozing from the border of the mesentery and to prevent future adhesions it was decided first to run a suture along its edge. This took considerable time Then the gangrenous bowel, twelve feet and two inches (365 cm), was resected and withdrawn through the vagina An end to end anastomosis was made with a Murphy button The uterus was next inspected and found to contain seven punctures The one extending through the left broad ligament was somewhat enlarged and the interior of the uterus inspected The fetal head and part of the placenta had been left These were removed and the uterus curetted through the enlarged opening The uterine punctures were then sutured and after the peritoneal toilet and the establishment of drainage the abdomen was closed in layers

Postoperative History—The patient was transferred to a private room in fair condition Pulse was 150, but of good volume, temperature 97 4 F, respiration 30 A saline transfusion was given under the breasts After awakening from the anesthetic she was put in Fowler's position Strychnin, 1/30 gr hypodermically, was given every three hours, and coffee and normal salt solution by the rectum every four hours

During the night the patient rested fairly well, complaining but little of pain or nausea The following morning at 9 her pulse was 120 respiration 26 and temperature 99 8 F Nausea increased and emesis was very profuse and of dark brown color and the patient was very restless Wound was dressed and looked good with a seemingly serous discharge Abdomen was soft everywhere and no tympanites In the afternoon the temperature rose to 102 F At 2 p m she was given an enema —1 part magnesium sulphate, 2 parts glycerin, and 3 parts water—with good results During the night she was restless and had four bowel movements On the morning of the second day her pulse was 120, temperature 100 8 F, and respiration 20 Nausea and vomiting had practically ceased by the afternoon, and during the night she was given her first nutrient enema She rested well, sleeping at intervals By the morning of the third day her pulse was 104, temperature 100 F and respiration 18 Wound began a profuse discharge of pus containing colon bacilli This continued until the fourteenth day On the fourth day, in the morning her pulse was 92, temperature 100 F and respiration 18 Nausea and vomiting had entirely ceased In the afternoon she received milk by the mouth Her condition on the fifth day as regards pulse temperature and respiration was practically normal and from that time her recovery was uneventful The button was passed on the tenth day During the entire course there was no tympanites The diet was gradually increased till on the seventeenth day she was put on a regular diet The patient was out of bed on the nineteenth day, and on June 17, the twenty seventh day after the operation, she left the hospital Two weeks afterward she was troubled with a diarrhea, which lasted about two weeks Later she went into the country, where she improved quickly On Feb 5 1907 eight months after the operation she has gained 31 pounds complains of no symptoms of adhesions, or local tenderness

* Read before the Southwest Branch of Chicago Medical Society and patient and specimen presented Feb. 5 1907

GONORRHEA IN CHILDHOOD

J W INGRAM, M D
MARSHFIELD (COOS BAY), ORE

CASE 1—Colored child aged 7, previous history negative

History—The child had been sick for three weeks when I was called The father stated that the child had been treated for typhoid fever during the entire time, but without any appreciable change for the better The history was misleading in many respects The child complained of nausea, slight headache loss of appetite, abdominal tenderness, pain through

the small of the back as the father put it, constipation, frequent and painful micturition The temperature was less than 100 F., pulse was somewhat accelerated The general appearance was that of one who had suffered long and patiently

Examination—I suggested to the mother that a more thorough examination of the child be made, to which she readily consented. In the outward appearance of the vulva there was nothing to attract special attention, except that the tissues were slightly inflamed, on pressure some tenderness was found to exist On separating the labia a mucopurulent discharge was detected Here the mother admitted that the child had suffered from leucorrhea for a month or more With a small eyelet probe I managed to secure a sample of the discharge for examination A microscopic examination of the discharge (Gram's method) was made and gonococci were found.

Treatment—I put the child on a milk and other liquid diet, and prescribed a tonic treatment, an alkaline preparation for neutralizing the urine, and absolute rest in bed. Locally I prescribed a wash of permanganate of potash, 1 to 10,000, given by means of a small rubber syringe, three or four times daily, after each washing a small pledget of absorbent cotton, dusted with boracic acid, was placed in the vagina in such a way as to separate the labia. The child made a rapid recovery

CASE 2—This case is a little more interesting inasmuch as it occurred in a child of less than 4 years of age

Patient—Child, white, aged 3½ Previous history unimportant This child had been under the care of a physician for over two weeks and had been treated for worms, general debility and cystitis, but without results

History—This was similar to that in the former case I proposed a thorough examination of the child, but the parents objecting, I refused to be further consulted until I was allowed to make such examinations as I saw fit and the parents departed The following morning I was called to their home to make such examinations as I saw fit

Examination—The entire vulva was highly inflamed and tender to pressure, the inner portions of the thighs were likewise red and somewhat tender On separating the labia a creamy discharge oozed freely from the vagina A small pledget of cotton was passed into the vagina and withdrawn saturated with the discharge Microscopic examination (Gram's method) revealed gonococci

Treatment—The child was put on a milk diet, plenty of pure, fresh air, tonics bowels opened freely, and absolute rest required A neutralizing preparation was given to render the urine bland Locally I prescribed a wash three or four times daily, of protargol 1 per cent., given by means of a small rubber syringe After each washing a small pledget of absorbent cotton, dusted with boracic acid was placed in the vagina in such a way as thoroughly to separate the labia. So far, this child seems to have recovered

HYSTERIA OR MALINGERING IN A GIRL OF TEN YEARS

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In the light of my experience of more than a quarter of a century in the practice of ophthalmology this seems to me a unique case of unusual interest. The question is Is it likely that this is a case of hysteria in a child of 10 years with no manifestation or evidence of any immediate approach of the catamenia?

Patient—Miriam G aged 10 of light complexion blue eyes, from Kansas, was brought by her father to consult me Jan 8, 1907

History—The father stated that up to the week previous the child had seemingly good eyes with good vision but last Friday, January 4, she came from school and said that during the afternoon, while studying the page suddenly became red Thereafter she complained of all colors appearing red, with the exception of objects of red color, which looked white. She spoke of the red brick sidewalk looking white whereas the light gray pavement was red While in my office the father designated several articles of red color and she would instantly call them white, or he would point to some white object and she would say it was red

Tests—I suspected malingering at once and placed the patient twenty feet from a white light and asked her the color of the lamp, she instantly called it red I then put on a trial frame and inserted a green lens, but she said the light still looked red I then inserted a red lens, at first she said the light looked white, but finally said, when I put in another lens of the same shade, that one was a light red and one a dark red I then suggested to her that I should place a lens in the trial frame which would correct the color blindness With a plano before her eye she would name all colors correctly I then tested her with the different colored yarns She at first called all of them red, excepting the red skein, which she called white. I again suggested to her that I could correct the defect by glasses and once more placed the plano glasses before her eyes, then she named, as I pointed to them, the colors correctly The child had a slight convergent strabismus with hypermetropia, and I suggested to the father that an operation to straighten the eyes would also effect a cure of the color blindness Whether the fear of an operation influenced the child I do not know, but on January 9, at 5 o'clock, the color blindness, the father said, disappeared as suddenly as it came. This the child also related to me when she called at my office, January 10

If this phenomenon had occurred in a willful, intractable, disobedient child, one would not have been so baffled for a cause of the malingering, but M is a modest, obedient, rather retiring little girl of an excellent family

I prescribed glasses for the existing hypermetropia and allowed the child to go home, advising them, however, to return in six weeks that I might keep the case under surveillance

805 McGee Street.

THE PASSAGE OF METHYLENE BLUE FROM THE MATERNAL TO THE FETAL CIRCULATION

S H CORRIGAN, M D
SIOUX FALLS, S. D

Failure to find record of any similar observation in the study of placento-maternal circulation would seem sufficient reason for submitting the following

A woman, three months pregnant, suffering much from a chronic cystitis, was given a capsule of methylene blue compound As the medicine produced almost complete relief of symptoms, the patient continued taking it up to the time of her delivery, at full term The average dosage given her was three grains of the methylene blue daily At delivery the baby, an unusually vigorous child, attracted no special attention, but when the nurse was removing the first diaper she noticed a blue stain on the cotton, each subsequent change of diaper during the first eighty hours after birth gave evidence of methylene blue in the infant's urine, the color gradually disappearing Nothing else unusual was found in the baby's condition. It was noticed that the liquor amnii showed no unusual color, careful inspection of the sheets and pads used during labor failed to show any trace of color from methylene blue

From these observations I may perhaps venture to assert

1 Methylene blue passes from the circulation of the mother to that of the fetus

2 Either the amount thus passing is an exceedingly small portion of the drug absorbed by the mother or the drug passes from mother to child and *vice versa*

During six months the mother received into her stomach about nine drams of methylene blue, while an estimate based roughly on the amount of colored urine passed by the infant would place the quantity of the drug in the child's body at time of birth not above one grain

3 There being no evidence of methylene blue in the liquor amnii, the fetus does not evacuate the bladder and the liquor amnii accordingly is in no degree composed of fetal urine

4 The kidneys of the child *in utero* do not secrete urine beyond that found in the bladder at the time of delivery, or if they do secrete urine beyond this amount, they do not excrete methylene blue, which may be in the fetal circulation

The first evacuation of the bladder in this case occurring very shortly after birth, produced the characteristic stain So it would seem that the kidneys not only secreted urine but also excreted methylene blue, while the child was still *in utero*, but not more than that contained in the bladder at the time of delivery

APHONIA OF UNKNOWN ORIGIN AND OF SIX MONTHS' DURATION IN A TWO AND ONE-HALF-YEAR-OLD CHILD,

DISCOVERY OF AN OPEN SAFETY PIN IN THE LARYNX *

JAMES T CAMPBELL, M.D
Professor of Otology Rhinology and Laryngology in the Post Graduate Medical School, Chicago
CHICAGO

Aphonia is most often due to an inflammation of the larynx when the swollen tissues interfere with free approximation of the vocal cords, to new growths, to a neurosis, or to a paralysis of the recurrent laryngeal nerve A foreign body in the larynx causing aphonia is rare indeed, yet a complete collection of all the foreign bodies which, at one time or another, have found their way into the larynx would, probably, comprise specimens of every known substance

ETIOLOGY

Food products generally gain entrance during mastication while the person is laughing or talking Metallic substances are occasionally impacted in the larynges of children while they are amusing themselves by putting coins, buttons, toys, etc., in their mouths In rarer instances, teeth and tooth-plates become loosened during sleep and are drawn into the glottis

Foreign bodies may also become fixed in the larynx, having previously passed upward through the trachea or esophagus Edwards[1] relates the curious case of a boy in whom a bronchial gland became detached, passed by an ulcerated opening into one of the bronchi and was thence expelled up the trachea, and became impacted in the rima glottidis

Some idea of the frequency with which foreign matters become fixed in the different parts of the air passages may be gathered from a report made by Bourdillat[2] of 166 cases in which analysis 80 cases were of foreign bodies arrested in the trachea, 35 in the larynx, 26 in the right bronchus and 15 in the left bronchus

SYMPTOMS

The symptoms vary according to the size and shape of the foreign body If fixed in the rima glottidis and large enough to fill the opening, death is almost instantaneous, unless the convulsive respiratory efforts of the patient succeed in dislodging it. On the other hand, small bodies such as fish bones, may remain in the larynx for an indefinite length of time without interrupting respiration and will merely give rise to coughing and a sensation of discomfort Sharp and angular bodies cause very acute and continuous pain when they become so impacted as to press against the contiguous soft parts Generally great anxiety and terror on the part of the patient accompany the entrance of any foreign body, however small, into the air passages and in many cases somewhat disguise the real importance of the accident

DIAGNOSIS

As a rule, the history of the case is clear and laryngoscopic examination verifies or disproves the statement made by the patient In children and hysterical women a correct diagnosis can not always be made immediately and at such times a skiagraph should decide the case in question.

There is always great danger while the foreign body remains in the air passages or larynx It may become dislodged and assuming an altered position close the glottis and suffocate the patient There is danger also of inflammation and tumefaction of the soft parts of the larynx which may cause more gradually the same result Even after the foreign body is removed one should give a guarded prognosis as long as there are symptoms of local inflammation

History.—Ruth J., aged 2, in January, 1906, was given a dose of castor oil by her father, while her mother held her Violent coughing immediately ensued and persistent aphonia resulted, it was thought by her parents and by the local physicians that during the child's struggles the oil had been inspired into the larynx. They expected that with the advent of warm weather speech would return, but in this they were disappointed, and on Sept 3, 1906, she was brought to me.

Examination.—On that day I was unable to make a laryngoscopic examination, but on the day following, at the Post Graduate Hospital she was anesthetized and with the laryngeal mirror I saw a metallic body lying on the upper surface of the right vocal cord

Removal and Recovery.—With the Schroetter tube forceps I grasped this body and withdrew an open safety pin, which was 23 mm. in length and 15 mm in extreme breadth The pin point and the looped hinge were held fast in the respective ventricles of the larynx. The child was cared for at the hospital for thirty six hours and was then allowed to go home speaking as plainly as before the castor oil episode The mother had no knowledge of a safety pin being about her own or the baby girl's clothing but probably it was crowded into the child's mouth during her struggles to escape the castor oil, and then drawn into the larynx during a forcible inspiration.

34 Washington Street.

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* Read before the Chicago Laryngological and Otological Society Dec. 11 1906

1. Med. and Chir Transactions xxxvi.
2. McKenzie Diseases of the Pharynx Larynx and Trachea

The Blood During Pregnancy After Splenectomy.—Cova reports in *Ginecologia*, m 716, 1906, the findings in regard to the blood in a woman who became pregnant about a year after removal of the spleen on account of malarial enlargement She was in good health thereafter The number of red corpuscles and the number of whites were approximately normal throughout the pregnancy, as also the percentage hm the proportion between the white leucocyt n' from normal Polynuclear forms were unde while lymphocytes were scanty Eos ca abounded and increased in numbers d while the red corpuscles showed some w powers

New and Non-Official Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NON OFFICIAL REMEDIES", THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY

(A list of all accepted articles is published on one of the advertising pages of The Journal in the first issue of each month)

(Continued from page 877)

BROMO-MANGAN

LIQUOR FERRO-MANGANI BROMOPEPTONATI "DIETERICH"

Bromo-mangan is Ferro-mangan Dieterich with the addition of 3 per cent of bromopeptone. Bromopeptone contains 11 per cent of bromine.

The process of preparation is the same as that given under Ferro-mangan Dieterich with the addition of a solution of bromopeptone.

Bromo-mangan is a clear dark brown liquid of agreeable odor and taste.

Method of Valuation.—After determination of the percentage of iron and manganese a test method should be employed as described by Dr. Karl Dieterich in Helfenberg Annals 1901, pages 162-165, to ascertain the percentage of halogens in bromopeptone. About 0.5 bromopeptone to be thoroughly mixed with a few grammes of a mixture of 1 part potassium nitrate and 2 parts sodium carbonate either in a porcelain or platinum crucible. The mixture is then covered with a light layer of sodium carbonate, covered and carefully heated until reaction sets in. When finished a little potassium nitrate is added to obtain a smooth flux, then the molten mass is exposed to glowheat for about 15 minutes. After cooling the mass is dissolved in hot water, rinsed into a beaker, filtered if necessary, acidulated with diluted acetic acid and bromate present reduced with sulphurous acid. The excess of acid is driven off by heat, the liquid strongly acidulated with nitric acid, again heated until the gas formation ceases, then precipitated while hot with silver nitrate. The silver bromide is collected on a weighed filter, washed with very dilute ammonia water as the preparation contains hydrochloric acid, dried and weighed.

Actions and Uses.—Bromo-mangan is a reconstructive tonic, blood making adjuvant and a sedative.

It is claimed to be useful wherever anemia is associated with nerve impairment, as in epilepsy, neurasthenia, hysteria, etc.

Manufactured by Chemische Fabrik Helfenberg A. G., near Dresden, Germany (Reinschild Chemical Co., New York). U. S. trademark No. 44,333.

EUPYRINE

VANILLIN-ETHYLCARBONATE-PARA-PHENETIDIN

Eupyrine, $C_6H_4(OC_2H_5)N\ [CH\ C_6H_3(O\ CO\ OC_2H_5)(OCH_3)]\ 1\ 4 = C_{19}H_{23}O_5N$, is a compound of paraphenetidin with vanillin ethyl-carbonate.

It is prepared by the action of vanillin ethyl-carbonate $C_6H_3(COH)(O\ CH_3)(O\ CO\ OC_2H_5)\ 1\ 3\ 4$ on an equivalent amount of para phenetidin $C_6H_4(O\ C_2H_5)(NH_2)\ 1\ 4$. Chemically it differs from acetphenetidin (phenacetin) in that the vanillin ethyl-carbonate group has replaced the acetyl group of acetphenetidin.

It occurs in light yellow needle-shaped crystals melting at 87° to 88° C. (188.6 to 190.4° F.), tasteless with faint odor of vanillin. It is insoluble in cold water, sparingly soluble in warm water and in cold alcohol, readily soluble in warm alcohol and in ether or chloroform.

Concentrated sulphuric acid is colored by eupyrine greenish yellow in the cold and dark brown on heating to the boiling point. Heated on platinum foil it burns without residue. Acids and alkalies decompose it.

Actions and Uses.—The toxic action of phenetidin is said to be counteracted in eupyrine by the vanillin. Doses twenty times as great as those used for man show no production of an amount of methemoglobin recognizable by the spectroscope. It is claimed to be a stimulant antipyretic.

Eupyrine is claimed to be useful as an antipyretic, especially for patients with a weak stomach or otherwise sensitive, on account of its freedom from side effects.

Dosage.—For adults, 1,5 Gm. (23 grains) once or twice daily. It can be given by itself as a powder.

Manufactured by Vereinigte Chininfabriken Zimmer & Co., Frankfort a. M., Germany (C. Bischoff & Co., New York.) U. S. patent No. 658,446. U. S. trademark No. 39,577.

FERRO-MANGAN DIETERICH

LIQUOR FERRO-MANGANI PEPTONATI "DIETERICH"

Ferro-mangan is a solution of a compound of peptone with iron and manganese, containing 0.6 per cent. of iron, 0.1 per cent. of manganese and 1.5 per cent. of peptone.

It is prepared by covering 40.0 Gm. of Iron and manganese peptonate Dieterich' with distilled water for one hour, then heating to boiling with 550.0 Cc. of distilled water and allowing to cool. An aromatic mixture is added consisting of 100.0 Cc. cognac, 75.0 Cc. alcohol 90 per cent., 0.25 Gm. saccharin, 12.5 Cc. aromatic tinctures and sufficient distilled water to make 1000.0 Cc.

Ferro-mangan is a clear liquid of a dark brown color and pleasant odor and taste. It is slightly acid in reaction.

The iron is in the organic or non ionic form (see Organic iron preparations).

Method of Valuation.—The specific gravity at 15° C. (59° F.) should be about 1.056. The percentage of dry residue at 100° C. (212° F.) varies between 13.25 and 16.80. The percentage of residue after ignition varies between 0.99 to 1.05. The percentage of iron and manganese determined by well known methods varies between 0.58—0.64 per cent. of iron and 0.13—0.19 per cent. of manganese.

Actions and Uses.—It is a reconstructive tonic and hematinic.

It is recommended in anemia, chlorosis, convalescence and wherever a general tonic is required.

Dosage.—4 to 16 Cc. (1 to 4 fluidrams), according to age, three times a day.

Manufactured by Chemische Fabrik Helfenberg A. G., near Dresden, Germany (The Reinschild Chemical Co., New York.) Not patented or trademarked.

FORTOIN

METHYLENE-DICOTOIN

Fortoin, $CH_2(C_{14}H_{11}O_4)_2 = C_{29}H_{24}O_8$, is a condensation product of cotoin and formaldehyde.

It is prepared by condensation of cotoin and formaldehyde by means of dehydrating agents (hydrogen chloride) $2C_{14}H_{12}O_4 + CH_2O = CH\ (C_{14}H_{11}O_4)_2 + H_2O$.

Fortoin forms yellow needle-shaped tasteless crystals, melting at 211° to 213° C. (411.8° to 415.4° F.). It is insoluble in water, sparingly soluble in alcohol, ether or benzol but freely soluble in dilute alkalies, acetone or chloroform.

Fortoin dissolves in cold concentrated sulphuric acid with an orange color and on warming the solution becomes ruby red. Heated on platinum foil it should burn without leaving any residue. On shaking with cold water or alcohol it should not yield any soluble constituents.

Actions and Uses.—Fortoin has an antiputrefactive, bactericidal action. It is said to cause an active, not passive, dilatation of the intestinal vessels by which the nutrition of the epithelium is improved and its regeneration hastened. This action is said to show itself in cases in which tannin produces only apparent success.

Fortoin is recommended as an antidiarrheic in acute and chronic intestinal catarrh and in the obstinate diarrheas due to pellagra and to tuberculosis.

Dosage.—0.25 Gm. (4 grains) three times a day for adults.

Manufactured by Vereinigte Chininfabriken Zimmer & Co., Frankfort a. M., Germany (C. Bischoff & Co., New York.) German patent No. 104,362. U. S. trademark No. 39,523.

(To be continued)

Naming of Carbon Compounds.—The prefix "phen" is commonly used to indicate derivation from or relation to phenol, thus phenol, phendiol, phentriol, phenetrol, etc. It has been proposed to apply the name phen to benzene, C_6H_6, and to indicate all benzene derivatives by this prefix.—*Pharm. Rev.*, September, 1906.

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[For other information see second page following reading matter]

SATURDAY, MARCH 16, 1907

THE INFREQUENCY OF TUBERCULOSIS IN LARYNGOLOGISTS AND LUNG SPECIALISTS

When, some years ago, Flugge and his pupils made the discovery that in coughing, or even in loud talking, patients with pulmonary tuberculosis gave off a fine spray containing tubercle bacilli, it was thought that an important factor in the spread of tuberculosis had been discovered It was claimed by the discoverers that this form of infection, which they called "droplet" infection, was largely responsible for the transmission of the pulmonary form of the disease, and the idea that personal contact with phthisical patients was comparatively harmless, which had been fostered by the theory of the transmission of the disease by dried sputum, was more or less discredited While it can not be said that the profession was entirely weaned from the theory of transmission from sputum dust, there is no doubt that the importance of this method of transmission was to some extent minimized, and the new theory to a certain degree adopted in its place Whether this view is tenable is still more or less of an open question

Saugman[1] of Copenhagen has for some time been an opponent of droplet infection, and the main fact on which he bases his opposition is that physicians who make a specialty of lung and laryngeal diseases are very rarely attacked by pulmonary tuberculosis He points out, and with some justice, that no one runs greater risks from droplet infection than a physician engaged in examining the lungs or the larynx The lung specialist, during the examination of a chest, places himself under conditions favoring droplet infection, for he is constantly urging his patient to cough, in order that doubtful physical signs may be brought out, and must of necessity inspire, perhaps for several hours daily, an atmosphere loaded with minute particles of moisture containing tubercle bacilli The laryngologist is subjected to even more direct chances of infection, for probably all the members of this branch of the profession have the experience, almost daily, of patients coughing in their faces That tubercle bacilli are actually transmitted under such circumstances is a proved fact Moeller claims to have found them on the eye-glasses of an assistant, on the head mirror, on his cheek, and in his own nasal cavities after examining patients with laryngeal tuberculosis

1 Ztschr für Tuberculose January 1907

As Saugman points out, notwithstanding these observations the fact remains that of 174 physicians in sanatoria for pulmonary tuberculosis questioned by him only two, or at most three, had become infected with tuberculosis during a period of over three years constant association with tuberculous patients Of sixty-four laryngologists under similar conditions none had become tuberculous The main conclusion that Saugman draws from these observations is that in healthy adults the inspiration of droplets containing tubercle bacilli is entirely, or almost entirely, free from risk so far as giving rise to tuberculosis is concerned That this conclusion is justifiable we are not at all certain We do not deny the facts or question the figures, but we do feel doubtful that conclusions drawn from these observations are applicable to healthy adults under all conditions It must be pointed out that Saugman's figures deal with a special class of men, individuals who have a good working knowledge of what tuberculous infection means, and who are by no means anxious to court it It is fair, we think, to assume that the great majority of these men take special precautions, and, it must be added, they are most of them working in institutions especially constructed to combat tuberculosis There is little doubt that all of us, particularly the city dwellers, inspire a greater or less number of tubercle bacilli yearly It would not be correct to argue therefrom that because those of us who are healthy resist infection the inhalation of tubercle bacilli is harmless Saugman takes too little account of individual resistance in healthy adults and seems to forget that it is generally not the healthy but those who present local or general predisposing factors who contract the disease For the present, in spite of Saugman's observations, we are justified in assuming that droplet infection probably plays some part in the transmission of tuberculosis

IMMIGRATION AND INSANITY

For many years it has been a matter of observation that immigrants furnish an undue proportion of the insane in this country This was forcibly pointed out during the last century by Dr Foster Pratt and others The native Anglo-American stock, when not depleted by emigration and deteriorated by intermarriage, does not seem to be excessively inclined to mental disease There are sections in this country, especially in certain parts of the middle west and in the south, where foreign immigration has not materially been felt as a factor, and in which insanity is a comparatively rare disease, and while defectives may be found there the degree and proportion of the particular evil is not specially alarming In other sections however, where the foreign element is more in evidence the proportion of insanity is rapidly rising so that a foreign-born minority of the tion furnishes a notable majority of the

The present status of this quest

of a paper read by Dr Thomas

State Conference of Charities and Correction at Rochester, N Y He discusses a phase of the question which is just now of special interest, namely, the effect of the changed character of the present immigration from that of some years back Then Irish, Germans and Scandinavians formed the bulk of the new comers and were considered in a general way more desirable additions to the population than the Slavs, Italians, etc, that form the greater portion of the present inflow Taking the numbers of individuals of the different nationalities certified as insane at the immigration headquarters on Ellis Island and those deported from New York institutions as insane under the emigration laws, he finds a great preponderance of young insane—that is, individuals between the ages of 15 and 30 years—a fact which, as he shows, is of considerable practical importance as indicating a more rapidly increasing burden on the resources of the country It also indicates, so far as it goes, a special mental instability on the part of these immigrants who, it must be borne in mind, must necessarily include a large number who escape the scrutiny of the inspectors and yet do not break down sufficiently within the two years limit to become public charges and, therefore, deportable. In the table given, Austria-Hungary, Russia and Finland furnish fully 50 per cent of the total, Ireland and Italy being next In proportion to the total immigration from special countries, however, the number of those rejected or deported is greater in the Irish and English than in the Slavs and Southern Europeans The figures are too small to be as conclusive as desirable, though they are significant.

He also gives tables of the proportions of insanity among the different nationalities of foreign born in this country taken from advance sheets of a report of the United States Bureau of the Census, which are very striking They show that 1 in every 121 of the Irish-born residents of this country is insane, 1 in 185 of the French born, 1 in 195 of the Scandinavians, 1 in 211 of the Germans, and so on in a gradually decreasing ratio till we reach the Italians with a proportion of only 1 in 439 It must be remembered, however, that the Italians and Slavs are comparatively recent comers and much of the insanity among them is yet to develop This fact affects the figures given in his table comparing the ratio of insanity in the former and the later classes of immigrants, and the statistics are, therefore, not so encouraging as they might appear "If it is impossible," he says, "to make any reliable comparison between ratios of insanity in the 'old' and the 'new' immigrations, it is not difficult to show that, even with lesser ratios of insanity in the 'new immigration,' the increase in its volume assures us that the influence of immigration on the prevalence of insanity in this state (N Y) will be more adverse in the future than it has been in the past unless energetic and successful steps are taken to prevent it"

As regards idiots and mental defectives other than the insane ruled out by immigration inspectors the figures are somewhat different and not encouraging Here the Hebrews and Italians are very largely in the majority, other nationalities being represented by comparatively insignificant figures This class includes those who would be no less a burden on the community than the insane, comprising as it does a large proportion of individuals with criminal instincts or generally morally defective. Moreover, a very much larger number of such defectives must slip through the inspection than of those whose mental aberration is manifest, and the immigration law is imperfect inasmuch as it does not make their deportation mandatory, except in the case of idiots The future, therefore, is not promising with the continuation of present conditions The burdens will increase in all probability until some as yet unforeseen equilibrium is established or immigration ceases While the immigration inspectors may endeavor to do their full duty—and Dr Salmon shows that their efficiency has been steadily increasing—it is easy to see that their scrutiny necessarily must be inefficient to keep out the flood of defectives from Europe

If we could inspect these people in their homes more could be done, but that would be difficult In fact, we believe it has been tried to some extent and the measures taken by our Government have been resented and embarrassed in some cases by the local authorities abroad We must remember, also, that a very large part, probably the great majority of the foreign-born insane, become such, not so much from excessive or noticeable original defect as from stress under unaccustomed conditions after arrival in this country, they would probably have escaped insanity under their accustomed conditions at home This is one of the unavoidable consequences of immigration and can not be completely met by any practicable measures except the exclusion of immigrants entirely As Dr Salmon says "It is the sudden increase of stress on minds but poorly adapted to withstand a very moderate amount of stress which in many instances causes the early development of insanity" We should investigate, he thinks, the most common causes of adversity among newly-landed immigrants and remedy such as are remediable Among these he mentions the tenement and sweat-shop evils, child labor, the urban concentration of immigrants, the exploitation by their own countrymen, and the common crime of wife desertion There is work here for all the charity that we can give and it will be for our own profit and safety in the long run if we can give it. The question of the future of this country with the disturbing factors of the excessive influx of alien races is a serious one and sometimes severely tests our optimism We believe, however, that the ultimate outcome will be good, but the problem nevertheless is one that deserves our careful attention A composite race has its advantages and it may be that these evils that we see so prominently at present are after all only incidental to the working out of an eminently satisfactory result

MILITARY EFFICIENCY AND THE MEDICAL SERVICE OF ARMIES

"Health said Napoleon, "is indispensable in war and can not be replaced by anything" This axiomatic saying of the greatest soldier of modern times has been proved time and again, in war after war, and campaign after campaign. The entire failure of the Walcheron expedition through the sickness of the command, the terrible losses of the allies in the Crimean war, the disastrous campaign of the French in Madagascar and the heavy losses of the Americans and British from preventable diseases in the Cuban and South African campaigns, all bear witness to the truth of Napoleon's remark. On the other hand, the Germans—who until the Japanese-Russian war have always been considered easily first in the science of preventive medicine—surprised the entire world by the exceedingly low sick rate which their armies maintained in the Franco-Prussian war of 1870-71 Still more recently the astonishing results of the Japanese in their war with Russia have established a new record in preventive medicine and one by which all other nations will be weighed in the wars of the future.

Now, why have Japan and Germany been able to attain results in the prevention of disease in their armies in the field beside which our own high inefficiency rates appear so discreditable? Simply because Japan neglected no measures which were deemed necessary to render her armies efficient, and gave official recognition, both in theory and practice, to the fact that "health is indispensable in war and can not be replaced by anything" Accepting this truth, they prepared for war in time of peace. The first essential in the promotion of efficiency by the prevention of disease was a medical corps adequate in size for war as well as for peace and composed of medical men of the highest class and thoroughly trained not only in the care of the sick but also in the prevention of disease under service conditions The results thus attained by the Japanese in preventive medicine attracted the attention of the whole world and we may rest assured that the American people in their next war will be satisfied with nothing less than the Japanese standard

The keynote of Japanese success was preparedness—are we prepared? Congress has just adjourned having again failed to pass the bill the title of which is "to increase the efficiency of the medical department," but whose main object is to increase the efficiency of the Army by making adequate provision for the care of the sick and the prevention of disease In the light of what has so often been stated in these columns of the total inadequacy of the medical department of the Army even in time of peace, a complete breakdown in time of war is inevitable and the failure of this bill can be considered nothing less than a national calamity and one which when the time comes, will be felt in many homes throughout the country When war comes again as it will and the cry goes up throughout the country of unnecessary suffering, sickness and death among the soldiers who have responded to their country's call, and who deserve nothing less than the best attention that care and foresight on the part of their government can provide, the responsibility for failure will surely be fixed where it belongs—on the present Speaker of the House of Representatives It was he it is understood who refused to allow the bill to come to a vote, though it had passed the Senate and had been favorably reported by the Committee on Military Affairs of the House On Speaker Cannon, and on Speaker Cannon only must rest the responsibility for the continuation of the present unsatisfactory conditions and for what may occur in case of war

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WEST VIRGINIA OSTEOPATHIC BILL NOT PASSED

It is a pleasure to correct the statement made in last week's issue of THE JOURNAL that the bill passed by the West Virginia Legislature was the bill introduced by the osteopaths, similar to the one introduced in so many states Dr Wm W Golden, President of the West Virginia State Medical Association writes that the bill adopted in that state was a substitute bill, which was passed through the efforts of the state association The bill adopted requires osteopaths to pass an examination before the regular board of examiners, which, in West Virginia, is the State Board of Health The examination is the same as that given to physicians except in practice and treatment on which subjects provision is made for the board to call in an osteopath as an assistant in the examination This is a much safer law than the one first introduced In this connection, attention is called to the summary of osteopathic legislation for 1907, which will be found in the department of Medical Economics in this issue The danger to the public in the adoption of these bills, which are being persistently pushed by the osteopaths, is self-evident State societies and especially committees on medical education, should be alive to the situation and should use every means in their power to defeat these bills

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CONTAGION FROM RETURNED BOTTLES

Physicians in Austria are reported to have found it necessary to specify that in case of refilling all prescriptions used in infectious diseases a new bottle shall be used A number of suspicious cases of infection have emphasized the possible danger of infection from bottles taken from the sick room In a recent case in this country a drug clerk raised the question whether or not bottles returned from scarlet fever patients might have been the cause of his taking the disease The possibility is certainly a present one, especially if the bottle were wrapped in the patient's room and in paper that had been handled by the patient. The conveyance of any one of several diseases by this means should be borne in mind by physicians and pharmac[illegible] [illegible] prevent error in the transmission of [illegible]ired

1 Wisconsin Medical J

scription, could have a germicidal garbage-can, into which the messenger could drop the bottle after having held it up for the reading of the number by the pharmacist The danger is not a pronounced one, but in epidemics every precaution should be taken

AN OBJECT LESSON FOR LEGISLATORS

The lower house of the Missouri Legislature now in session was stampeded recently by the discovery that one of its members was suffering from smallpox of a mild type which did not prevent him from occupying his seat. Since then a number of members have been attacked by the disease, and the safety of important party measures has been threatened by the absence of the victims There are many rabid anti-vaccinationists in Missouri, and while, so far as we are aware, there is no pending legislation instigated by them, as in other states, the present condition of affairs affords an object lesson which may possibly be effective in preventing such measures in the present and possibly in some future legislatures Of course, impressions produced by epidemics or disease outbreaks do not last forever, but as a rule they serve a purpose in stimulating sanitary zeal, and, while the medical profession does all it can to prevent epidemics, there is no reason why it should not utilize their occurrence to point a moral or adorn a tale It is to be hoped that the smallpox outbreak in the Missouri Legislature will have a not unfavorable effect as regards the medical legislation now before that body

PURE FOOD IN WEST VIRGINIA

West Virginia is among the states which need a pure food law, and those who have the good of the public at heart are endeavoring to secure one But, as usual, they have little cooperation from the newspapers When the governor, in his message, urged the enactment of such a law every Wheeling paper omitted from the publication of the message what he said on this subject "By request" one paper printed the governor's views several days later This is just one indication of the opposition to be met in West Virginia It is worth a great deal to have a governor outspoken on the side of pure food, and the governor of that state undoubtedly represents the views of the vast majority of the public when he says[1] "It certainly is the highest duty of the state to protect its people against the iniquities aimed at in pure food legislation Such legislation should include the sale of 'patent medicines,' which is one of the greatest frauds practiced on the people Many of these so-called remedies are poisonous, deleterious to the human organism, and their sale is worse than obtaining money under false pretenses On the label of every 'patent medicine' there should be required to be stated in plain language the stuff of which it is composed" Certainly the profession and those of the public who are not financially interested in the manufacture, sale or advertisement of nostrums agree with the governor, and we trust that they have become sufficiently aroused to demand and to secure the necessary legislation

1 West Virginia Med Jour February 1907 p 185

PHOTOGRAPHING AND WEIGHING THE SOUL.

Some twenty years ago the Chicago *Times*, which is no longer in existence, contained a two-column account from a correspondent in a western town regarding the photographing of the soul as it left the body The correspondent graphically described the whole affair, giving in detail the modification made in the camera for the purpose, the special artificial light required and how it was obtained, the name of the individual the disease of which he died, the name of the street and the number of the house and everything necessary to carry conviction that it was a record of an actual occurrence Of course, the experiments were successful and a good photograph of the soul was obtained The story took, was copied all over the country and commented on seriously We are reminded of this by a report of similar experiments During the past week the newspapers have contained an account of some remarkable experimental work conducted by a homeopathic physician of Haverhill, Mass This gentleman had been pondering on the ponderability of the human soul and, to satisfy a craving for knowledge regarding this intangible but important nature of man, proceeded to weigh it Just how he did it or what scales he used are details not furnished It would be interesting to learn just how he knew when the soul left the body As to this point, our Massachusetts scientist might have been aided in his experimental work had he known that he could obtain the cooperation of the gentleman who knew the facts, if he did not perform the experiments, regarding the photographing of the soul We should be glad to give our Massachusetts friend the name of the gentleman who wrote the report for the Chicago *Times*, as he is still living and active It is a pity that the two can not be brought together, for if we could get the soul weighed and photographed at the same time it would be laying a foundation for other investigations regarding this all important subject

THE ANTITUBERCULOSIS CAMPAIGN

The wide interest now being taken, both by the medical profession and the public at large, in the prevention and cure of tuberculosis has been the basis of previous editorial comment. Any means that may further stimulate professional and public interest in this subject is worthy of notice Such a means is to be found in the report[1] recently issued by the government, in which is given a brief history of the fight made by federal and state authorities against the scourge of tuberculosis National action has followed, rather than preceded, state activity, and the report gives a list of the states which have taken official action looking to the control of the disease, and gives, also, the dates of the beginning of the movement in those states Twenty-nine states are thus listed and to Pennsylvania belongs the distinction of being the pioneer, having as far back as 1885 begun a crusade against tuberculosis A résumé of the work done in each of the states and a list of the various state sanatoria make the report one of great value to those interested in this important subject

1 Public Health Reports of the U S P H and M H Service Washington D C March 2 1907

Medical News

ILLINOIS

Unlicensed Doctor Fined.—William J Black, Rockford, charged by the State Board of Health with practicing medicine without a license, did not appear when his case was called March 5, and was fined $200

Personal—Dr John F Snyder, Monroe Center, was rendered unconscious by being thrown from his buggy in a runaway accident February 24——While driving across the railroad track the buggy of Dr Jay A Logan, Bartonville, was struck by an engine Dr Logan was thrown about 20 feet, escaping, however, with slight injuries——Dr Alvin N Keith, Peoria, is suffering from a severe attack of motor aphasia.——Dr Charles E Crawford, Rockford, has been appointed by the State Board of Health, inspector for the northern district of Illinois——Dr John W Tope, Oak Park, has broken down from overwork in connection with the new Oak Park hospital

Legislative Progress—There has been no change in the status of the four osteopathic bills referred to in previous issues of THE JOURNAL, viz, Senate bill No 21, and House bills Nos 66 318 and 319 The legislative committee of the state medical society and the State Board of Health feel that they will be able to prevent the passage of these bills, but they desire to receive the support of the organized profession These organizations are also opposing the optometry bill (House 256), and the antivivisection bill (Senate No 267), both of which are similar to the bills of like name that were killed in 1905 Senate bill No 341 and House bill No 474, introduced respectively by Senator McKenzie of Jo Daviess County and Representative Krape of Stephenson County, would repeal the itinerant vendor section of the medical practice act, and permit the unrestricted practice of all "proprietary" medicine men who pay a tax of $75 a year Senate bill No 341 has been rapidly advanced and is now on its third and final reading Senate bill No 377 and House bill No 536 contain "jokers," which are not perceptible to the casual reader These bills would revise section 7 of the medical practice act and omit two words, e g, "material remedy" and thus would permit unrestricted practice of "magnetic healers" and others who profess to treat by mind, magnetism and manipulation The State Board of Health has had introduced a bill (House No 468), making necessary amendments to the State Board of Health act This bill, which has been favorably recommended by the committee on sanitary affairs, is now on second reading It is the intention of the board to have introduced also a bill covering defects in the medical practice act This bill has been wisely held back in order to let those opposed to the medical practice act show their intentions

Chicago

Interne Examinations—At the annual interne examinations at Cook County Hospital, which began March 11, 111 applicants appeared The examination continued through three days The appointment of those who are successful will be made in July

Ambulance Service—During the first week of the ambulance service under the care of the department of health, the surgeons treated 60 sick and injured persons, and 226 patients were given first aid, of whom 183 were removed to the hospital and 37 taken home Two insane persons were cared for and 9 dead bodies removed.

Deaths of the Week.—During the week ended March 9, 650 deaths were reported, 130 fewer than for the previous week, and 43 more than for the corresponding week of 1906, equivalent to an annual mortality of 16 08 per 1,000 The principal death causes were Pneumonia, 125, consumption, 82, heart disease, 53, nephritis, 41, and violence (including suicide), and acute intestinal diseases, each 29

Communicable Diseases.—The chief medical inspector reports that during the week 115 cases of diphtheria, 240 cases of scarlet fever and 130 cases of measles were reported to the department of health This is a reduction of 26 in the number of diphtheria cases and 20 in the number of scarlet fever cases as compared with the previous week The total number of infectious diseases reported was 495, or 35 fewer than last week

Personal—Dr Gottfried Kochler stood at the head of the list as the result of the examination for chief food inspector——Dr and Mrs Philip H Matthei celebrated their fiftieth wedding anniversary March 5——Mr M A Lane, formerly of the department of anatomy at the University of Chicago, has taken charge of the histology work at the Turck Institute, and Prof Conrad Jacobson, professor of physiologic chemistry at Armour Institute, has accepted the position of food analyst

INDIANA.

Nostrum Advertisements on Wrapping Paper—The Cass County Medical Society, at a recent meeting, passed resolutions requesting local druggists not to use paper containing "patent medicine' advertisements for wrapping medicines dispensed on prescriptions, and stating that, if necessary, the society will furnish plain paper to the druggists

Personal—Dr and Mrs Samuel D Weir, Terre Haute, are taking a trip to Florida and Cuba——Dr William J Sandy has been appointed secretary of the board of health of Martinsville, vice Dr A Salem Tilford, resigned.——Dr Frank Broughton has resigned as secretary of the Waterloo board of health——Dr William Flynn, Marion, has gone to Porto Rico for two months

Ill and Injured.—Dr Charles S Stewart, Auburn, is reported to be dangerously ill from hemorrhage——Dr Charles E Patrick, Indianapolis, who has been seriously ill with nephritis, is reported to be convalescent——Dr Martin V McKinney, Charlestown, was declared insane in the Clark County Court, February 20——Dr Ira L. Brown, Alamo, is suffering from cerebral hemorrhage——Dr Edwin M Trook, Marion, has had a severe attack of influenza

Epidemic Diseases—Fifteen employés of the Chicago, Lake Shore and South Bend Railroad are under quarantine at New Carlisle, on account of smallpox. Three cases of the disease have appeared——An epidemic of measles in severe form is reported from Muncie and Delaware Counties——Nearly 100 cases of measles are reported at Knightstown——On account of the prevalence of scarlet fever, four rooms of the Hibberd school, Richmond have been closed——Michigan City is said to be threatened with an epidemic of typhoid fever——It is reported that more than 1,000 cases of influenza exist in Evansville

Sanitary Enactments.—The following sanitary enactments have been passed by the legislature A bill appropriating $30,000 with which to buy 500 acres of land for a State Hospital Farm, which will be the state institution for the treatment of tuberculosis The money is immediately available and the governor is to appoint a commission to select the land——A new statistical law which will require the State Board of Health to collect records of births, contagious diseases and marriages The death records of the state since 1900 have been very accurate because of a peculiar penalty in the law which provides that "in the event of a burial without a permit, as required in this act, then the coroner shall disinter the body, hold an inquest and make report of his findings within three days to the nearest health officer"——A law requiring cities, towns and counties to furnish free antitoxin to those too poor to purchase it. The State Board of Health is required to furnish blanks which are to be filled out by physicians for free antitoxin, and the blanks are a claim on the city, town or county in which the antitoxin is required In the event of a physician abusing the law or securing antitoxin falsely, he is liable, for the first offense, to a fine of $50, and for the second a fine of $100 and imprisonment at the discretion of the court.——A pure food bill along the lines of the national food and drugs act, providing $15,000 for enforcement A large food laboratory has already been established, with a competent food chemist in charge There are three assistant chemists, two clerks and four inspectors The inspectors will also be made deputy state health officers This law contains one section in regard to slaughterhouses which will make it possible to promote sanitary conditions all over the state in this industry, and will do away with the insanitary slaughterhouses at present so common Under the section it will be unlawful to sell the carcass of any animal for human food which has been slaughtered, prepared or handled under unsanitary conditions Such carcass can be seized by the health officer and the sale stopped.——On account of these new laws it will be necessary for the State Board of Health to issue a new book of instructions to health officers also to pass new rules establishing standards for the pure food law The physicians of the state are much gratified over these salutary laws, and feel that the State Board of Health and its efficient secretary, Dr John N Hurty, deserve much credit for their efforts

IOWA.

Smallpox.—Keosauqua reports nine cases of smallpox——Seven cases of smallpox in five families near Postville are reported—Several families at Loveland are quarantined and the public school is closed——Smallpox in the family of the station agent at Alta has caused [illegible] of the station

Surgical Society Formed.—The Iowa Surgeons' Clinical Society was recently organized at Des Moines and the following officers were elected President, Dr Alanson M. Pond, Dubuque, vice president, Dr William W McCarthy, Des Moines, and secretary treasurer, Dr David S Fairchild, Jr, Clinton. Meetings of the society are to be held every three months

Personal.—Dr Henry E W Barnes, Creston, has decided to locate in Santa Ana, Cal——Dr Frederick P Bellinger, Council Bluffs, is taking a trip to Peru, South America——Dr Daniel H. Killingsworth, Clarinda, was recently operated on in New York——Dr James M. Boothby, Dubuque, is reported to be seriously ill with hemorrhage of the lungs——Dr George E Decker, Davenport, has been appointed a member of the State Board of Health vice Dr Robert E Conniff, Sioux City——Dr E R Walker Princeton, has been appointed assistant surgeon of the Iowa Soldiers' Home, vice Dr William M Morton, Iowa Falls, resigned on account of ill health——Dr Peter A. Benditzen, Davenport, has been appointed assistant local surgeon for the Chicago, Milwaukee & St Paul Railway——Dr Frederick L. Welsh, Rutland, has returned from a trip to New Mexico

KENTUCKY

Pure Food.—R. M Allen, secretary of the Kentucky Pure Food Commission, made an address on pure food before the women's clubs of Louisville, March 6, in which he made an extensive exhibit of adulterated food products, described the work of the commission, and made a strong plea for pure food.

Inspection of Dairies.—At a conference held March 6 at Louisville, between members of the State Board of Health, its advisory committee, and representatives of the dairymen of Shelby County, plans were formulated for a series of dairy inspections throughout the state, to begin April 2 The work will be initiated at Shelbyville and then the dairies of Louisville and Jefferson County will be investigated

Nostrum Recommendation.—Health Officer Dr Maverell K. Allen, Louisville, has been considerably upset by the recommendation of a "cure" for consumption written by an employé of the health department on the official stationery on which Dr Allen's name appears This has been taken by a number of people as an advertisement bearing Dr Allen's recommendation, and he has been kept busy explaining the matter

State Board of Health.—The governor has appointed an advisory committee to the State Board of Health composed of the following Morgan Hughes, Bowling Green, vice president of the State Farmers' Institute, H D Rodman, Shelbyville, president of the State Dairymen's Association, and R. McDowell Allen, Lexington, secretary of the Kentucky division of the Interstate Pure Food Standard Commission The appointees, in addition to their advisory position will specially represent their organizations on the State Board of Health

Unprofessional Conduct Cases.—At a hearing before the State Board of Health, March 6, charges of unprofessional conduct preferred against Dr Sarah A. Murphy, Louisville, Dr Robert T Rudd, Fulton, and Dr William R. Rubel, Smith's Grove, were considered Dr Murphy was granted a continuance of 40 days, with the understanding that after her trial in the criminal court for criminal malpractice she would agree to the revocation of her license as a medical practitioner The license of Dr Robert T Rudd was revoked for two years and a continuance was granted in the case of Dr William R. Rubel on account of the presentation by his attorney of a temporary restraining order, issued by the Warren circuit court

LOUISIANA.

Personal.—Dr Frederick C Mayer, New Orleans, has been traveling in Mexico, Yucatan and the West Indies generally, as medical inspector of the Louisiana State Board of Health with reference to the yellow fever situation and quarantine

Visiting Nurses' Association to be Formed.—At a meeting held recently at the Jewish Orphans' Home, New Orleans, over which Miss Edith Loeber presided as chairman, a movement was inaugurated to institute a system of visiting nurses similar to that already in operation in other large cities of the country

Compromise on Quarantine Question.—A temporary compromise has been reached on the quarantine question, a provision of which is that Dr Clifford H Irion shall proceed to Washington to confer with the Secretary of the Treasury and the Surgeon General of the Public Health and Marine Hospital Service looking to a satisfactory arrangement between the state and federal authorities for a lease of the quarantine station for a limited time

MARYLAND

Baltimore

The City's Mortality.—The mortality for the week ended March 9 was unusually high, being equivalent to an annual death rate of 23 38 per 1,000 The deaths from pneumonia and tuberculosis were unusually numerous Accidents caused 16 deaths and measles 4 deaths

College Anniversary.—The twenty fifth anniversary of the founding of the Women's Medical College was celebrated February 26 Addresses were delivered by Dr Guy L Hunner, president of the faculty, Dr Charlotte L Murdoch, late of London, and Hilda L Fletcher, a member of the graduating class The annual oration was delivered by Dr Lewellys F Barker Since the founding of the institution in 1882, 93 women have been graduated who are in practice in nearly all parts of the world The college now has 35 students with a graduating class of seven.

Personal.—Dr Eugene R Smith is traveling in Palestine and Egypt this month In April he will go to Italy, France and England——Dr L. McLane Tiffany is in Florida——Dr S R. Barr, superintendent of the Baltimore and Ohio Railroad Relief Department, has gone to Southern California for a month for his health.——Dr Hubert Richardson, lecturer on physiologic chemistry, neurology and psychiatry at the University of Maryland, who recently inherited an estate by the death of a relative in England, has resigned his position and returned to his former home——A gold mounted baton was presented to Dr B Merrill Hopkinson, director of the Madison Avenue Temple choir, March 1, by the members of the choir

McCormack in Baltimore.—Dr J N McCormack, chairman of the Organization Committee of the American Medical Association, visited Baltimore February 28, and was the guest of the Medical and Chirurgical Faculty of Maryland at the University club He was entertained at lunch by Dr Hugh H Young, and in the evening was the guest of honor at a dinner given by Dr Hiram Woods, president of the faculty In the afternoon he delivered an address before the members of the profession, and in the evening delivered a public lecture at McCoy Hall on "Things About Doctors That Doctors and Other People Should Know" The Governor of Maryland presided at the public meeting and addresses were made by the president of the school board, the president of the Board of Charities and Corrections, and others

MASSACHUSETTS

Deaths in the State.—The census covering 1901 1905 inclusive, shows that in 1905 the death rate in Massachusetts was 16 8 per 1,000 Deaths from tuberculosis in Boston were 201 6 per 100,000, from cancer in Massachusetts were 89.3 per 100,000, and in Boston, 105 6 per 100,000

Fire in Hospital.—By the calmness and bravery of the nurses and attendants at the Newton Hospital, a panic was prevented when a fire was discovered in the basement of one of the hospital buildings February 22 Fortunately, the fire, which was in the administration building, was soon brought under control

Epidemic Diseases.—Methuen reports 128 more cases of communicable diseases in 1906 than in the previous year—— At Gardner two additional cases of scarlet fever were reported March 1, and 20 pupils of the public schools who showed symptoms of the disease were ordered to remain at home for observation.

War on Consumption.—The Lawrence board of health has issued a small pamphlet, prepared by the Boston Association for the Relief and Control of Tuberculosis, containing, in brief succinct paragraphs, directions how to prevent consumption, the things bad for weak lungs, the things good for weak lungs, and directions in regard to the special care of households and children

May Exclude Unvaccinated.—The full bench of the Supreme Court of Massachusetts has decided recently that the school authorities have a right to exclude from school unvaccinated children even when a physician's certificate of unfitness for vaccination is presented, if there is an epidemic of smallpox in the district The case which was so decided occurred in Hyde Park in 1902 and has been in the courts ever since

Legislation Against Harmful Drugs.—Dr Ezra W Clark Brockton representative in the legislature, has introduced a bill providing that morphin or its derivatives shall not be sold except on a physician's prescription, and only once on a prescription and that on the label there shall appear whether the substances contain morphin, codein opium, heroin, chloroform, cannabis indica chloral hydrate, acetanilid or their derivatives

Appointments.—Dr Henry Pickering Bowditch has been made George Higginson professor of physiology, emeritus, from September, 1900, at Harvard University Medical School.——The following changes have been made in the staff of the first battalion, field artillery, M. V. M., Captain George Osgood, Boston, has been made surgeon with the rank of major, vice Major John F. Harvey, Boston, retired, Dr. Edward B. Seever, Jr., Boston, has been appointed assistant surgeon with the rank of first lieutenant and Dr. J. Forrest Burnham, Lawrence, has been made hospital steward.

Medical Society Meetings.—At the annual meeting and banquet of the Eastern Hampden Medical Association, held in Springfield, February 28, the following officers were elected: President, Dr. Irving R. Calkins, Springfield, vice president, Dr. Halbert G. Stetson, Greenfield, secretary-treasurer, Dr. Morgan B. Hodskins, Monson, and censor, Dr. Abbott L. Cooley, Chicopee Falls. At the banquet Dr. Leslie H. Hendee, Pittsfield, was toastmaster. The principal speaker was Dr. Vincent J. Irwin, Springfield, retiring president, who delivered a valedictory address on "The Doctor and the Doctor's Wife."

Personal.—Dr. Mary T. Bissell, superintendent of the North Adams Hospital, has resigned.——Dr. Henry J. Millard, North Adams, has been elected medical inspector of the Massachusetts department of the G. A. R.——Dr. Charles H. Thomas has been elected chairman of the Cambridge board of health.——Dr. Samuel T. Orton, Boston, has taken charge of the pathologic department of the Columbus (Ohio) State Hospital, vice Dr. Isbel Bradley.——Dr. David Cheever has been elected president of the class of 1901, Harvard University Medical School, and his engagement to Miss Jane W. Sargent is announced.——Dr. Walter C. Seeleye, Worcester, has been elected secretary of the Amherst Alumni Association.——Dr. Fred G. Bushold has been elected milk inspector for Lawrence, vice Dr. Patrick J. Hughes.

Medical Bills.—Among the medical and public health matters which are before the state legislature are the following: The osteopaths have been given leave to withdraw a petition for the establishment of a state board of osteopathic examination and registration, a bill providing for the appointment of school nurses for Boston has been cordially supported by many physicians before the committee on cities, as has also a bill directing the school committee to take charge of the physical training of children in school yards, playgrounds, parks, etc., during vacation seasons as well as other parts of the year, two bills directed against christian science practice have failed to pass the committee, a bill on the petition of Dr. Richard C. Cabot seeking more exact labeling of "patent" or proprietary drugs and foods has been approved by the committee, a bill urged by Dr. Charles E. Harrington of the State Board of Health, providing that the certificate of exemption from vaccination of a pupil in the public schools must be signed by the school physician assigned to that school was most vigorously opposed by anti vaccinationists, and the committee has modified the recommendations by simply adding to the present law the words that the certificate shall be "granted for cause stated therein." Hence if adopted, the law will read "A child who has not been vaccinated shall not be admitted to a public school except on presentation of a certificate granted for cause stated therein, signed by a regular physician, that he is not a fit subject for vaccination."

MINNESOTA.

Clinical Hospital Donated.—Walter J. Trask, Los Angeles, has offered $114,000 to the University of Minnesota for a clinical hospital to be known as the Elliot Memorial Hospital in memory of Dr. Adolphus S. Elliot and Mary S. Elliot, his wife.

Scarlet Fever.—As the result of an outbreak of scarlet fever at Tower the school board has closed the schools for a week. Two deaths have occurred from the disease.——Bruno is suffering from a severe attack of scarlet fever which has caused the schools to be closed. Three deaths are reported.

Personal.—Dr. Gustav A. Renz has been appointed health commissioner of St. Paul, vice Dr. Justus O'Hage.——Dr. Fletcher W. Penhall Morton was seriously injured by being thrown from his carriage February 17.——Dr. Emil H. Beckman, city physician of Minneapolis, has resigned to accept a position in St. Mary's Hospital, Rochester.

MISSOURI.

Hospital Saturday and Sunday.—At the annual meeting of the Hospital Saturday and Sunday Association St. Louis, it was reported that the total receipts from the collections during 1906 were $30,574.77 and the receipts from members dues $407. On Christmas the amount distributed to hospitals was $38,734.81.

University Medical Department.—A conference regarding the state university medical department was held recently at Kansas City between committees of the legislature, the curators of the university and Mayor Beardsley, relative to the conditions under which the third and fourth year medical classes from the university will be brought to Kansas City. The curators require a bonus of $150,000, land in the vicinity of the General Hospital building and exclusive clinics at the General Hospital.

Personal.—Dr. John Young Brown, St. Louis, has resigned as superintendent of the City Hospital, to take effect April 1. He has been appointed professor of clinical surgery at St. Louis University and chief surgeon at St. John's Hospital, vice Dr. A. Van Liew Brokaw, deceased.——Dr. James Romine, Kansas City, is reported to be seriously ill at a Hospital in Wichita.——Dr. Harry T. Randle, Clayton has been appointed a member of the medical staff of the United Railways Company.——The residence of Dr. W. B. Prim, Deerfield, was burned to the ground March 2.

Smallpox.—On account of the prevalence of smallpox in Jefferson City, the mayor issued a proclamation on February 26 closing theaters, skating rinks, dance halls, and all places of public amusement.——A detention hospital has been established near Jefferson City.——Several cases of smallpox are reported among the factory girls in St. Joseph.——It is reported that there were 50 cases of smallpox in Jefferson City before the first case appeared in the House of Representatives.——The local board of health of Jefferson City issued an appeal to the State Board March 3, asking it to revoke the order closing places of public amusement. The appeal states that during the six weeks of the epidemic there were 38 cases of smallpox all in modified form that all cases have been clearly traced to the same foci of infection, that the epidemic is completely under control, that at present there are but 27 cases in the city, and that ten patients would be on that day discharged.

NEW YORK.

Applies for Pardon.—An application has been made for a pardon for Dr. Edward F. Conrad of New York who in May, 1905, was convicted of criminal malpractice by the New York County Medical Society and sentenced to prison for from one to two years. He wishes to be restored to citizenship and to be permitted to resume the practice of medicine. Decision on the application has been reserved.

Medical Societies Agree on Single Standard.—It is regarded as a matter for congratulation that an agreement has been reached whereby the different medical societies have decided to accept the legislation creating one medical board. The osteopaths are to pass a medical examination after 1910, and no one is to be permitted to practice osteopathy unless he has taken a three years' course of nine months a year in a recognized school of osteopathy.

Bills Introduced in the Legislature.—The following bills of interest to the medical profession have been introduced in the state legislature. An act to amend the agricultural law, relative to the sale of slaughtered game, animal or fowl that shall have been kept in cold storage, provides that after 15 days such products shall have attached thereto in plain letters the words "Cold Storage," or that there shall be a conspicuous sign over the place of sale, in black letters at least four inches long with the words "Cold Storage" thereon.——An act to amend the public health law, in relation to pharmacy, limiting the application of the article which is not to apply to the practice of a practitioner of medicine who is not the proprietor of a store for the dispensing or retailing of drugs medicines and poisons, it shall not prevent practitioner of medicine from supplying their patients with such articles as they may deem proper, and except as to the labeling of poisons it shall not apply to the sale of medicines or poisons when not for the use or consumption of the purchaser for destroying insects or any substance for use in the arts, or to the manufacture and sale of proprietary medicines or to the sale by merchants of essences and substances in general use.——An act to provide for the keeping of medical and surgical appliances in railroad cars which provides that every passenger car shall have a medical and surgical chest containing plasters, bandages, absorbent cotton, gauze and all necessary appliances for emergency use, that each chest shall have attached thereto printed in conspicuous type a card of instructions containing in plain and simple language the mode and use of the various articles above enumerated. Violation of this law incurs a penalty of $5 per car for each day that such violation shall contin[illegible] act [illegible] the labor law, relative to confection[illegible]

plumbing and proper ventilation of all buildings or rooms occupied as biscuit, bread, macaroni, spaghetti, pie or cake bakeries ——An act to amend the penal code in relation to crimes against the public health and safety, with reference to the sale of poisons, which provides that it shall be unlawful for any person to sell at retail or furnish any poison named in the schedule without affixing or causing to be affixed a label containing the name of the article and the word "poison" distinctly shown with the name and place of business of the seller, all printed in red ink, together with the name of such poison printed or written thereon in plain, legible characters

New York City

Outdoor Department Opened—The Jewish Maternity Hospital, 270 East Broadway, has opened its outdoor department and applicants are received daily except Sunday, from 3 to 5 p m

No Danger of Diphtheria Epidemic.—The two internes ill with diphtheria who were taken from Bellevue Hospital to the Minturn Hospital, are reported to be entirely out of danger, and the three other internes who were under suspicion are said not to have the disease, so that there is no danger of an epidemic as was feared by some

Lecture on Tropical Medicine—The Society of Tropical Medicine will hold its first meeting in New York at the New York Academy of Medicine, March 29 Dr Louis L Seaman, who has recently returned from a trip to Central and Eastern Africa will be one of the speakers and will give an address on the hygienic conditions and the diseases which he observed during this trip

Contagious Diseases—There were reported to the sanitary bureau for the week ended March 2, 418 cases of tuberculosis, with 102 deaths, 326 cases of measles, with 6 deaths, 301 cases of diphtheria, with 51 deaths, 297 cases of scarlet fever, with 17 deaths, 51 cases of whooping cough, with 7 deaths, 41 cases of typhoid fever, with 9 deaths, 14 cases of cerebrospinal meningitis, with 12 deaths 4 cases of smallpox and 86 of varicella making in all 1,538 cases, with 294 deaths

The Bulkley Lectures—The governors of the New York Skin and Cancer Hospital announce that Dr L Duncan Bulkley will close his clinical course with four special lectures as follows March 27, "Practical Points in the Diagnosis and Treatment of Diseases of the Skin" April 3, "Errors in Diagnosis and Treatment, Don'ts in Dermatology," April 10, "Danger Signals from the Skin," and April 17, "The Significance and Treatment of Itching" A lecture is also announced on April 24 by Dr William Seaman Bainbridge on "Some Phases of the Cancer Problem" The lectures will be given in the outpatient hall at 4 15 p m

Public Hearing on the Milk Question.—The health committee of the board of aldermen gave a public hearing March 7 on the project of compelling by ordinance the pasteurization of all the milk sold at retail or wholesale in this city The ordinance provides that after June 1 no raw milk or cream shall be sold at retail or offered for sale in the city of New York, unless it comes from herds certified as free from tuberculosis, and unless the milk or cream has been certified by the department of health, as containing not more than 50 000 bacteria to the cubic centimeter All milk and cream not conforming to this standard shall be pasteurized by exposure to a temperature of 167 degrees for at least 30 minutes For the purpose of enforcing this ordinance it shall be unlawful to offer raw milk or cream for sale unless thus certified or in cans on which the name of the dairy is distinctly named It gives methods for examining herds and provides for bacterial examination by the board of health Mr Strauss was present and quoted from many eminent authorities to show the importance of pasteurization A letter from the board of health was read stating that this body feels that its first and most important work is to supervise the conditions under which milk is produced, preserved transported and sold The board considers the ordinance defective in regard to the number of inspectors and to the bacterial and chemical examination The board has under consideration further measures but does not think it advisable at present to adopt partial or untried measures which are likely to delay or defeat the purpose in view The board of health had for many years advocated sterilized or pasteurized milk for infants The final hearing will be held in two weeks, when action will be taken

NORTH CAROLINA.

Smallpox in College—Smallpox appeared recently at the Boys' College Oak Ridge but the two patients were promptly quarantined and the entire community vaccinated

Degenerative Legislation Checked.—A number of bills introduced in the legislature providing that "graduates of reputable medical colleges can legally practice medicine in the counties of Clay, Cherokee and Graham without securing a license from the State Board of Medical Examiners" met with the usual fate of such measures and were filed

Personal.—Dr Herbert A Royster, Raleigh, entertained the faculty and members of the junior and senior classes of the University of North Carolina, Medical Department, at a dinner February 22 ——Dr Peter R. Hatch, Youngsville, is reported to be quite ill at his home ——The sophomore class of the Medical College of North Carolina was given a banquet by the president of the college, Dr John Peter Munroe, February 22

Society Meetings.—The Medical Society of North Carolina will hold its annual meeting at Morehead City by the Sea on May 28, 29 and 30 On June 3 and 4 the Tri State Medical Association of Virginia, North and South Carolina will hold its annual meeting at Norfolk, Va This arrangement will make it convenient for the members to attend the American Medical Association at Atlantic City, thus taking in the three meetings, with an absence of only about ten days from home

OHIO

Tuberculosis Hospital—Work has been started on the new tuberculosis hospital which Cleveland will erect at Warrensville

New Laboratory for Medical College—The trustees of the Western Reserve Medical College, Cleveland, are preparing to erect a new laboratory for experimental medicine, which is the joint gift of Col O H Payne and H. M Hanna The structure will be of steel skeleton construction, with sides and roof of glass as far as practicable

Society Meetings—The physicians of Bryan have organized a society to be known as the Bryan Medical Association The following officers were elected President, Dr John W Riggs, vice-president, Dr Daniel C McTaggart, and secretary treasurer, Dr Malvin V Replogle ——At a meeting of the Union Medical Association of the Sixth Councilor District, held February 21, at Akron, Dr Robert D Gibson, Youngstown, was elected president, Dr John H Seiler, Akron, secretary, and Dr Harold H. Jacobs, Akron, treasurer

Society Celebrates Semi Centennial—The Cincinnati Academy of Medicine celebrated its semi centennial by a banquet at the Hotel Sinton, March 4, at which 350 were present Dr John E Greiwe, the retiring president, was toastmaster and speeches were made by Dr Bryon Stanton, the only charter member present, and others The following officers were elected President, Dr Frank W Langdon, vice-presidents Drs William Gillespie and John C Oliver, secretary, Dr Mary K Isham, treasurer, Dr Alexander G Drury, librarian, Dr Arch I Carson, censors, Drs John E Greiwe, Edwin W Mitchell and E Gustav Zinke, and trustees, Drs James F Heady, Asa B Isham and Nathaniel P Dandridge Dr O D Norton, the oldest member, who is now 86 years old, was too ill to attend the celebration, but sent his greetings and farewell

Personal.—Dr Jacob A Kimmell, Findlay, is making a visit to Panama and Central America ——Dr Charles E Sawyer, Marion, is critically ill at his home ——Dr William T. Ramsey has been elected health officer of Cambridge ——Dr Walter R. Griess, Cincinnati, has been elected assistant surgeon of the police and fire department ——Dr Theodore W Rankin is reported to be critically ill with typhoid fever at his home in Columbus ——Dr Peter E Joseph, Sr, Cincinnati, is reported to be critically ill with heart disease at his home ——Dr Alvin L Light, Dayton, has been appointed jail physician ——Dr Samuel S Wilson, Xenia, is taking a trip to Cuba ——Dr Adams B Howard, superintendent of the Cleveland State Hospital, has resigned ——Dr Frederick Lahmere, Barberton is reported to be seriously ill with typhoid fever ——The Cincinnati Academy of Medicine recently entertained Dr George W Crile, Cleveland, who spoke on transfusion of the blood

PENNSYLVANIA.

New Miners' Hospital—The secretary of the United Mine Workers has announced that Shamokin has been selected as a site for the new miners' hospital

Railway Surgeons Meet.—At a meeting of the staff surgeons of the Pittsburg & Lake Erie Railroad held in Pittsburg the following officers were elected President, Dr John D Milligan Pittsburg vice presidents Drs William A Shannon, Ellwood City and John J Allen Monaca, and secretary treasurer, Dr Edward M Bland, Coraopolis

Personal.—Dr J Lawrence Eisenberg has been elected pathologist of Charity Hospital, Norristown, vice Dr Fred N Henderson resigned ——Dr Stoddard P Gray, Chester, has been seriously ill with pneumonia ——Dr William T Davies, Jr, Harrisburg, has been elected first resident surgeon at the Miners' Hospital, Fountain Springs, to succeed Dr Clay W Weimar, resigned ——Dr James M Matthews, Reading, recently celebrated his ninetieth birthday anniversary ——Dr Edwin S Heiser, Lewisburg, sailed from New York for Europe, February 7

Hearing on Vaccination.—All the so-called evils and alleged dangers to human existence were brought out March 5 by the State Anti Vaccination League of Philadelphia at a hearing on the anti vaccination bills now pending before the legislature Stereopticon views showing alleged cases in which children have become infected from vaccination, resulting in death, were thrown on the screen and commented on by the secretary of the league The anti vaccinationists are not opposed to the vaccination of persons who desire to be inoculated with the virus, but they object most strongly to the compulsory vaccination of those children of the public schools of the state whose parents object to the inoculation Health Commissioner Dixon, in addition to reciting the experience of foreign countries, like Germany, where smallpox has been virtually wiped out by vaccination, gave a number of cases that have occurred during his own term of office to prove how smallpox spreads among the unvaccinated Drs William M Welch and Jay F Schamberg, Philadelphia, delivered most convincing arguments and gave actual facts from the thousands of cases that they have treated at the Municipal Hospital to demolish the assertions of the anti vaccinationists Among the other speakers in favor of vaccination were Dr Seneca Egbert, dean of the Medico Chirurgical College of Philadelphia, and Dr Joseph MacFarland of Philadelphia

Philadelphia

White Entertained.—The Franklin Inn club entertained Dr J William White at an informal dinner March 1 Among those present were Drs Hobart A Hare, R. Tait McKenzie, Marshall Scull, John H Musser, J Chalmers Da Costa and Charles W Burr

Personal.—Dr Alfred Gordon has been elected president of the Philadelphia Neurological Society ——Dr Henry W Stelwagon, who has been clinical professor of dermatology at the Woman's Medical College of Pennsylvania for 22 years, has resigned on account of pressure of private practice ——Dr S Weir Mitchell celebrated his seventy seventh birthday anniversary February 15

Visiting Nurses.—At the annual meeting of the Visiting Nurses Society, it was announced that if $15,000 can be raised, they will receive a gift of $10,000 According to the secretary's report 45,368 visits were paid last year—an increase of 7,086 over the previous year In 1893, when the society was started, 10,000 visits were made to the sick poor The visits reported do not include the work in the two day nurseries at the Starr Center, or that of the school nurses Only graduates of hospital training schools are employed by the society, whose object is to give the best home nursing to the poor and those of moderate means There is still great need of a nurse for special work in tuberculosis and for a night nurse to send to special emergency cases

New Home for College of Physicians.—*It was recently decided* that the new home (see illustration on the next page) for the College of Physicians of Philadelphia should be at Twenty second and Market Streets The lot being 130 by 184 feet, with streets on three sides, gives an opportunity for the building to get a maximum amount of light and of fire protection The college, which is a medical society and not a teaching body, was founded in 1787 by Benjamin Rush, John Redman (who was its first president) and others In 1865 the present site was first occupied and the library of the society at that time was comparatively insignificant in size To-day, according to the estimation of C P Fisher, the librarian,[1] it ranks third in size and importance among the medical libraries of the world The beginnings of the library were made by donations from the members of the society and it owes much of its growth to the generous contributions that have been made either in the form of books or of money The entire library endowment fund at the present time, the income from which is used for the purchase of books and journals, amounts to $60,065 This amount includes thirteen large funds, together with the gifts of a number of smaller subscribers The growth of the library during the first seventy five years of its existence was slow, so that in 1836 the library contained only 291 volumes and in 1866 9,513 Since that time its growth has been steady, the number of volumes nearly doubling itself every ten years The present number of bound volumes is 82,305, of pamphlets 56,116, and of dissertations 20 978, 728 current periodicals are on the journal racks of the library The catalogue is made on typewritten cards and is undergoing a thorough revision, about half of the work having been completed This work is considered one of the finest examples of typewritten card indexes in existence The library contains a large number of medical antiquities and curiosities, among which may be mentioned a copy of what is probably the first medical book printed (about 1470), the first edition of the first medical dictionary (1473), the first edition of the first book printed on diseases of the eye (1474) Altogether there are 123 books printed before the year 1500 The first medical publication in the colonies was a "broadside' or poster instructing the people of New England "how to order themselves and theirs in the small pocks or measles" As was mentioned in THE JOURNAL, Jan 12, 1907, page 148, Mr Carnegie offered to contribute $100,000 toward the new home on condition that an equal amount was raised by the society This amount is now forthcoming, and the committee has been authorized to obtain full plans, specifications and bids The new building alone will cost about $250,000, to which the cost of furnishing must be added To Dr S Weir Mitchell, it is reported more than to any other one man is due the credit of this undertaking Dr Mitchell obtained the gift from Mr Carnegie and also obtained about one half of the entire amount subscribed

1 An Account of the Library of the College of Physicians of Philadelphia reprinted from the Transactions third series xxviii 1906

VIRGINIA

Darlington in Richmond.—Dr Thomas Darlington health officer of New York City recently delivered an address at Richmond on 'The School Nursing and Medical Inspection of Schools" in which he spoke on some phases of the anti tuberculosis work and gave the audience an idea of the importance and value of the work done by visiting nurses

Personal.—Dr Stark A Sutton Norfolk assistant surgeon of the second battalion Seventy first Infantry Virginia Volunteers, has resigned ——Dr Philip T Southall assistant physician at the Eastern State Hospital Williamsburg, has resigned ——Dr Elisha Barksdale has been elected president of the Lynchburg board of health vice Dr Patrick H Casey —— Dr William W Gill city physician of Petersburg has resigned and will locate in Chicago

Society Seeks Repeal of License Tax.—At the annual meeting of the Wise County Medical Society, held at Norton, the following officers were elected President, Dr T M Cherry, Glamorgan, vice presidents Drs William G Painter, Big Stone Gap, Robert P Carr, Norton, and George W Tompkins, Georgell, secretary treasurer, Dr Henry M Miles, Wise It was decided that each member of the Wise County Medical Society contribute the sum of $1 to be used by the committee appointed by the State Medical Society to secure the repeal of the license tax, which sum is to be paid to treasurer of this society ——At a meeting of the Richmond Academy of Medicine and Surgery, the following officers were elected President, Dr Ennion G Williams vice presidents, Drs John S Horsley, McGuire, Newton, and R. Bowman secretary, Dr Mark W Peyser (re elected), treasurer, Dr L K. Sheppard, and executive committee, Drs Stuart McGuire William S Gordan, Daniel J Coleman, and Ramon D Garcin

CANADA.

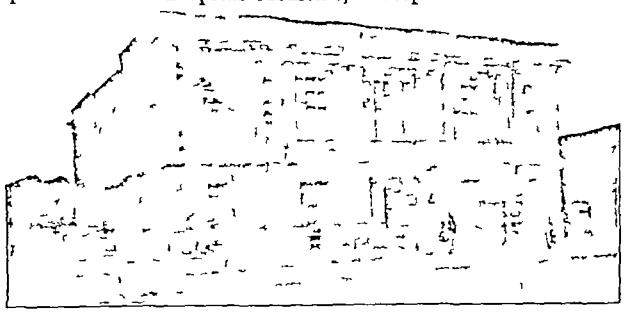
Vaccination.—The Toronto board of education has refused to reinstate compulsory vaccination, claiming that it is not its place to usurp the authority of the city's health officer ——Vaccination is gaining favor in Montreal In 1906 4,217 persons were publicly vaccinated in that city Of this number 121 were aliens or strangers As a people the citizens are now about as well vaccinated as any other city in Canada whereas only a few years ago but about 20 per cent of the population was vaccinated

Personal.—Dr E. D Hudson of the house staff of the Winnipeg General Hospital, will commence practice in Hamiota Man, *in partnership with* Dr Alexander Lawson ——Dr Henry Isson Young, Atlin B C, who has just been elected a member of the British Columbia legislature, has been called to the cabinet as provincial secretary ——Dr Samuel C Corbett Winnipeg has sailed for the Mediterranean ——Dr G B Archer has gone to Bengal, India, to engage in missionary work ——Dr [illegible] Toronto, has sailed for Naples Italy [illegible] Toronto has gone to Europe for grad

FOREIGN

Bubonic Plague in Siam—Since 1904 bubonic plague has been reported in various parts of Siam, but the diagnosis has always been based on either clinical symptoms or the simple examination of smears made from buboes or other organs In the cases recently appearing in Phrapatoom, cultures and experiments on lower animals were made, including rubbing the organisms on the shaven skin and subcutaneous inoculations By these methods a positive diagnosis of bubonic plague was made

Dutton Memorial Professorship—A research professorship in the Liverpool School of Tropical Medicine has been proposed as a memorial to Dr Joseph Everett Dutton, who did valuable work in four successive expeditions sent out by this school to Nigeria, the Gambia, Senegambia and the Congo Free State. He described *Trypanosoma gambiense*, the parasite since recognized as the cause of sleeping sickness, and gained high distinction for himself and a world wide renown for his school While investigating tick fever, previously little known, he contracted that disease and died The committee in charge of the fund say "All who knew Dr Dutton agree that the most fitting form which a memorial can take is one which will help to continue those researches in tropical medicine for which he gave his life" It is proposed to raise $50,000, and over $20,000 has already been pledged. The committee calls attention to the remarkable benefits conferred on commerce and travel by the additions to our knowledge of tropical diseases The case of the Panama Canal is cited as one instance Many problems are yet awaiting solution Any contribution to this fund should be sent to Mr A H. Milne, Hon Secretary, Liverpool School of Tropical Medicine, Liverpool



Proposed New Home for College of Physicians of Philadelphia (see previous page)

Crocker's Suit to Recover the Fee Paid a French Physician.—The cable has reported that the French courts have rejected the plea of the American, Mr Crocker, for restitution of the fee of $20,000 paid to Doyen in advance for treatment of Mrs Crocker, who had an inoperable cancer Doyen's serum treatment seemed to aggravate her condition and her husband discontinued it in a little less than a month, but did not formally dismiss Doyen until six weeks later Some months after the death of his wife he instituted suit for recovery of the fee saying that it was obtained under moral constraint, and that the sale of a therapeutic serum under these conditions is against the law, and that such a contract sale (*à forfait*) is also illegal He further contended that as only a few applications of the remedy had been made, Doyen was entitled only to remuneration for the treatments actually given The *Semaine Medicale*, February 27, gives the full text of the decision in the case which is altogether favorable for the interests of the medical profession It brings up a new point namely the conditions under which a physician has the right to employ as a means of treatment a new and non standardized serum The contract between Doyen and Crocker did not refer to the commercial exploitation of a new and secret remedy, but to a treatment in which a new serum was used A treatment of this kind given by a registered physician, the court said does not conflict with the laws regarding the commercial exploitation of viruses and serums Such a contract entered into freely by the parties, is not illegal That it was entered into freely by Crocker is shown by his engaging an agent to look after his interests and by his not signing the contract till after considerable discussion Doyen's part of the contract was to attend Mrs Crocker, whom he stated to be 'suffering from a recurring mammary cancer on the way to generalization and inoperable, and which I hope to cure" He did not give any assurance that he could do so, but his success in a number of similar cases, he said encouraged him in the hope

LONDON LETTER.

LONDON, Feb 23, 1907

Admission of Women to the Diploma of the Royal College of Surgeons

With that conservatism which is so prominent a feature of the British character, the Royal College of Surgeons has persistently refused to admit women to its examinations, although with that absence of logic which is equally a national characteristic, it allows women to use both the library and the museum of the college. At last there are signs that the fortress of prejudice is about to capitulate after a prolonged struggle As long ago as 1895, an influential petition was presented to the Royal College of Physicians and Royal College of Surgeons asking that the examinations be open to the students of the London School of Medicine for Women At that time there were over 200 women on the medical register and there was a steadily increasing demand for women practitioners The petition was discussed by both colleges and in each case rejected by a very narrow majority—a majority of 9 in 109 in the case of the College of Physicians and of 10 in 106 in the case of the College of Surgeons The College of Surgeons has now voluntarily raised the question and appointed a committee to consider the admission of women to its examinations As the examinations of the two colleges are conjoint it is scarcely probable that one will surrender without the other Women physicians are preparing a petition to the Royal College of Physicians They point out that at present English students are compelled to resort to the examinations of the Irish and Scotch colleges In these countries hide bound conservatism is not a national characteristic. The number of women on the medical register now amounts to 750, of whom more than 400 have been students of the London School of Medicine for Women The petition also refers to the greatly increased recognition accorded to women in the medical profession, as shown by the number of appointments held by them at home and in India, Persia, Africa and Egypt. The petition is signed by the staff of the Royal Free Hospital (the London hospital attended by women students), and by a number of the foremost physicians and surgeons of the day It is understood that the Royal College of Surgeons is taking advice on certain legal points raised by the question

The Laziest Man on Earth

An extraordinary case is reported from Belfast A man named Thompson, who lives with his mother at Clare Lurgan, went to bed in 1877, when he was a boy of 11, and did not leave it until three weeks ago, establishing a world's record for laziness He was looked after by his mother and his presence in the house was hardly known to the villagers Probably he would have remained in bed for the rest of his life had not his mother been taken ill and had to be removed to the infirmary Left helpless and alone Thompson was compelled to get up A search was made for the suit which he discarded twenty nine years ago but he was unable to dress without assistance Two neighbors were called in and the work of squeezing him into the suit occupied three men a whole evening When dressed he was too tired to walk and an ambulance had to be brought to convey him to the infirmary He reposed there until his mother was well enough to leave the infirmary, when he followed her home. He was compelled to walk as the authorities refused an ambulance Many physicians have attempted to stimulate Thompson out of his chronic lethargy Irritating plasters were applied, but without effect, mild electric currents failed to ruffle him and the physicians left him to enjoy the serene calm they were unable to disturb *Thompson is healthy and suffers only from chronic laziness* On returning home he again took to bed A later report states that he has changed his mind and says that he will sleep less The sight of the green fields and the busy world has awakened him to some interest in life He says that he is determined to make amends for the wasted years in the past However, no report has yet been made that he has made a move

VIENNA LETTER.

(From Our Regular Correspondent)

VIENNA, Feb 25, 1907

Nicotin-Poor Tobacco

The abuse of tobacco has prompted medical authorities to recommend the production of tobacco in which the dangerous substances especially nicotin, were either removed or rendered innocuous The Austrian government which has the monopoly of the tobacco trade took the matter up and began some time ago to produce special brands of tobacco which had been subjected to certain manipulations in order to comply with the wishes of certain parties These tobacco brands were almost

entirely free from nicotin The public, however, refused the article, it was not the tobacco from which they had been used to derive so much pleasure, and it was found that a certain percentage of nicotin must be retained in the tobacco leaves and smoke, otherwise the flavor and the peculiar taste of the leaves are sure to suffer A number of patents were thereon taken out on processes of denicotinizing tobacco, the following methods being still in use by the government tobacco factories For weak tobacco, from which a small quantity of nicotin is to be removed, an alcoholic lime solution is used. The chemical interaction results in the formation of insoluble lime salts of the malonic and citric acid, which latter are necessary for the flavor of the tobacco, while the nicotin and pyridin sub stances are mostly washed out The smoke of such tobacco contains only 50 per cent. of nicotin in comparison with the smoke of the unwashed tobacco Instead of lime a solution of potash may be used.

The latest patented process, which gives the best results and which is now adopted in the majority of the government factories, consists in heating the ready made cigars and cigar ettes to a temperature of nearly 200 degrees C The advan tage of this method lies in the fact that finished goods, even if they have been sold, can be subjected to the denicotinizing process The idea underlying this method centers in the fact that nicotin, though boiling at 240 degrees C., can be dis tilled over at 150 200 degrees without boiling Thus the cigars are placed in an air tight vessel and dry warm air is allowed to circulate freely between them by means of a system of glass pipes The nicotin and ammonia are extracted by the heat and are condensed in liquid form on the walls of the vessel whence these substances are conducted away by a system of tubes The temperature within the vessel is kept constant, varying according to the sort of tobacco employed. Tobacco subjected once to this treatment has the percentage of nicotin reduced by 20 to 50 per cent.

If treated two or three times the nicotin is reduced by 70 per cent., and treating it four times removes 95 per cent. of the poisonous alkaloid. But such tobacco is no longer pleasant to smoke, so that the government factory finally was content to extract only 50 to 70 per cent. As regards the physiologic action of such nicotin poor tobacco, it has been found that in cases of tobacco amblyopia and other forms of tobacco neuri tis, where total abstinence was not advisable for fear of bad effects, the habit of smoking could be kept up if this kind of tobacco was used, but even these had to be restricted to two or three per day A curious by effect, which was discovered by chance, was that in some cases of obstipation, smoking "nicotin free" tobacco resulted in a cure. But whether *post hoc* or *propter hoo* is still a question

Pharmacology

LACTOPEPTINE

Report of the Council on Pharmacy and Chemistry of the American Medical Association.

The following report was submitted to the Council by a subcommittee

We have devoted considerable time to the investi gation of Lactopeptine (powder) and report as fol lows

The label on the package contains this statement "Lactopeptine contains the five active agents of diges tion—pepsin diastase (veg ptyalin), pancreatin, lac tic acid and hydrochloric acid—combined in the proper proportion to insure the best results"

Examinations demonstrated that more than 90 per cent of Lactopeptine is milk sugar

The amount of pepsin contained in Lactopeptine is somewhat less than 10 per cent. of official pepsin.

Careful examination failed to show the presence of either diastase or pancreatin

Examination demonstrated a minute trace of chlorid only, therefore the preparation does not contain any appreciable amount of hydrochloric acid The amount of lactic acid calculated from the quantity of potas sium hydroxid required for neutralization, was found to be 3 per cent

From the above it is evident that Lactopeptine (powder) is at least no more efficient as a digestive agent than the ordinary Saccharated Pepsin official in the 1890 U S Pharmacopeia but replaced in the pres ent Pharmacopeia by the more active and dependable Pepsin.

These findings were submitted to the manufacturers of Lactopeptine, the New York Pharmacal Association, who, in their reply, stated "Regarding the as sertion that Lactopeptine does not contain pancreatin and diastase we herewith confirm and reassert our statement that Lactopeptine is and has always been manufactured in accordance with the published formula and that the ferments referred to exist in the preparation as stated in the formula"

In view of these reasserted claims regarding the composition of Lactopeptine, another specimen was purchased in the open market. Its examination showed that it was of even poorer quality than the first specimen examined. The tests not only failed to show the presence of diastase or pancreatin, but also failed to show the presence of any appreciable amount of pepsin

From these experiments, your subcommittee must conclude that Lactopeptine contains but small amounts of pepsin, that it contains no hydrochloric acid or mere traces only, and that it contains neither diastase nor pancreatin. Hence, the statements made by the manufacturers in regard to the composition of Lacto peptine are incorrect Since the composition of Lac topeptine is not that given by the manufacturer, but, instead corresponds to a weak saccharated pepsin, it is evident that the claims made as to its therapeutic value are unwarranted exaggerated and misleading It is therefore recommended that Lactopeptine be not approved. In view of the wide publicity given to the claimed composition and therapeutic value of the article it is further recommended that this report be published

The recommendations of the subcommittee were adopted by the Council, and in accordance therewith the report is pub lished W A. PUCKNER, Secretary

Reduced to a few words, the above report shows that—what ever the manufacturer may have put into it—Lactopeptine as it exists on the market was found by the subcommittee to be only equal to a weak saccharated pepsin, which has but one tenth the digestive power of the official pepsin and that Lacto peptine at times is inert

That the subcommittee which examined Lactopeptine could find neither diastase nor pancreatin was to be expected, since it has been demonstrated repeatedly that those ferments are destroyed by pepsin in the presence of acid The examination shows that in the absence of solvents the presence of lactic acid still enables the destruction of pancreatin and diastase That the manufacturers should have attempted to manufacture such an impossible product and that the medical profession should have accepted it is not creditable to either party con cerned

That the subcommittee should fail to find the hydrochloric acid claimed to be contained in the product was a foregone conclusion If it is remembered that ordinary hydro chloric acid is a solution of hydrogen chlorid in water and that hydrogen chlorid itself is a gas, the absurdity of the claim that it is contained in a dry powder is apparent.

It is astonishing that physicians should so long have used a product about whose therapeutic value extravagant claims have been made, when the very statements in regard to its composition should have condemned it

Kidney Remedies.

In THE JOURNAL, Feb 9 1907, page 511 we reproduced from the *British Medical Journal* analyses of several of the most widely advertised kidney remedies sold in Great Britain The same publication now publishes a report of Warner's Safe Cure and other similar preparations

WARNER'S SAFE CURE.

This preparation according to the literature supplied by the manufacturers is "purely vegetable" says the *British Medical Journal* and this predilection on the part of the public for vegetable remedies is probably responsible for potassium nitrate being classed as a vegetable Analysis of this remedy showed "the presence of potassium nitrate

alcohol, glycerin, a trace of oil of wintergreen and vegetable extractive" No alkaloid or similar active principle was found and the extract had little distinctive taste or character, all its properties pointing strongly to its consisting largely of taraxacum, with some other extract containing a small quantity of tannin

VENO'S SEAWEED TONIC

The label on this preparation, according to our contemporary, states that the remedy "contains in a pleasant and agreeable form the active principle of seaweed is prepared on an entirely new principle and is free from poisonous and mineral drugs" Analysis shows that the mixture contains "a small proportion of undissolved sediment, which, when collected and examined, agrees in all respects with the insoluble portion of leptandrin Glycerin, a little phosphate, alcohol and a trace of chloroform are present and vegetable extractive Careful examination of the latter gave evidence of the presence of the constituents of cascara sagrada, senna and rhubarb"

MUNYON'S KIDNEY CURE

The label on this preparation is said to bear the words "Cures Bright's disease, gravel, all urinary troubles, and pain in the back or groins from kidney diseases" It is stated that the pills were found to vary much in size, the average weight being 0 6 gram. Analysis showed them "to consist of ordinary white sugar, no trace could be detected of any alkaloid or other active principle, or of any medication The sugar was determined quantitatively and found to be just 100 per cent of the weight of the pilules"

Tucker's Asthma Cure

This nostrum, which is applied by a special atomizer, is discussed by O Anselmino (*Pharmaceutische Centralhalle*, Dec 6, 1906), who states that he has determined by experiment the amount of fluid which is delivered by various instruments His experiments show that at a single inhalation comprising 100 compressions of the rubber bulb about 0 15 gm (2 5 minims) would be sprayed from the Tucker apparatus Professor Strübing has shown that the amount may reach 0 40 gm (6 minims), an amount which is of no small moment considering the composition of the remedy The two analyses of Tucker's liquid for inhalation which have been made differ materially That of Aufrecht made in 1903, gives the following composition

Cocain hydrochlorate	1 per cent
Potassium nitrate	5 per cent
Glycerin	35 per cent
Bitter almond water	35 per cent
Water	25 per cent.
Vegetable extractives (probably from stramonium)	4 per cent

Bertram in 1905, on the other hand, found

Atropin sulphate	1 per cent.
Sodium nitrate	4 per cent
Vegetable extractives dissolved in water with some glycerin	0 52 per cent

Anselmino found at one examination that hydrocyanic acid was present, but a second sample contained none The former sample also contained a nitrite, but no potassium nitrate The amount of alkaloid was 1 per cent, the greater part of which was cocain

The inconsistencies in the analyses, they say, are partly due to the fact that proprietary remedies often vary in their composition from time to time and partly to difficulties inherent in the analysis of complex mixture. While atropin and cocain can be identified by characteristic qualitative tests their quantitative determination is very difficult and, when the quantities are so small it is practically impossible.

Bertram has proposed the following formula as a substitute for the inhalation liquid

Atropin sulphate	gr ii	15
Sodium nitrite	gr viii	6
Glycerin	gr xxx	2
Distilled water to make	ʒss	15

Mix and dispense in a bottle of dark glass To be sprayed from an atomizer and inhaled for three minutes

Anselmino thinks however that a 1 per cent solution of atropin is not safe for frequent inhalation as atropin poisoning may occur

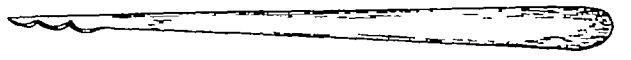
Correspondence

Hypertrophy of the Turbinate

BROOKINGS, S D, March 4, 1907

To the Editor —After reading with interest the article of Dr Kuyk in THE JOURNAL of March 2, in which he describes his method of dealing with hypertrophy of the inferior turbinate, I am prompted to describe a method which has proved successful in my hands The observations of Dr Kuyk on such points as excessive removal of tissue, the destruction of the function of mucous glands, etc., are wise I would discard entirely the cautery for this work and make use of methods which are more truly surgical The class of cases in which the cautery is still advised I believe can be treated more satisfactorily and with fewer objectionable results by the method which I have been using I refer to those chronically swollen turbinates which shrink under the application of adrenalin and give free breathing space The turgescence is accounted for by a dilated condition of the turbinal cavernous tissue

Submucous cauterization of such a turbinal seems to be even less rational than the old method of cauterizing through the mucosa For some time I have made use of a submucous operation with a saw knife, a sketch of which is shown



The tissues are anesthetized with a non ischemic anesthetic, such as alypin The mucosa is made clean as possible and just before making the incision the site is swabbed with a 1 per cent solution of alphozone The saw knife is inserted in the anterior end of the turbinal and carried as far back as may be desirable, hugging close to the bone With a few sawing sweeps of the knife the adjacent cavernous tissue is broken down and the knife withdrawn, leaving a single opening of *the size of the width of the knife* Free bleeding will occur, which will effectually settle any doubt as to possible infection, if ordinary asepsis has been observed The nostril is then packed tightly with compressed cotton tampons In two or three days' time the tissues have healed and remain permanently contracted without any external disturbance

The advantages claimed for this method, which is recommended only in such cases as are mentioned above, are 1, It is a clean operation, 2, it is simple in technic, 3, it takes but a moment of time, lessening pain and shock, 4, the after treatment is so simple that there is practically none, 5, the pain and discomfort following cautery or open operation are almost entirely absent, 6, the function of the mucosa is not impaired

No claim as to originality of the operation, other than the use of the saw knife, is made, the idea being to obtain the advantages of the submucous cauterization without the reaction and disturbance of function of mucosa which may follow

J G PARSONS

The Relation of a Scarlet Fever Epidemic to the Milk Supply

EVANSTON, ILL., Feb 17, 1907

To the Editor —As a matter of information you may be interested in knowing why the Evanston Branch of the Chicago Medical Society *unanimously* passed a resolution stating that in the opinion of its members almost the sole source of contagion in the recent epidemic of scarlet fever was infected milk

Last August there were several cases of scarlet fever which we were satisfied came from infection in the milk supply of a certain company which obtained its milk from a point in a neighboring state For a short time this company gave milk from another source, and furnished affidavits and statements to show that we were mistaken Occasional cases occurred until Jan 13 1907 At that time this company was supplying less than one seventh of the milk for Evanston, and from its Evanston depot It also supplied from this depot Wilmette Kenilworth Rogers Park and Edgewater On January 14 15, 16, 17 and 18 there were reported over a hundred cases of scarlet fever in this territory Whole families came down at once, and

even those supposed to be immune showed symptoms It was noticed that nearly every case used milk from the company in question, and Dr Parkes, our commissioner, at once prohibited more milk being brought from the locality previously referred to I think no milk was brought here from that point after Thursday, January 17, and immediately there was a falling off in new cases Within a week there were in Evanston city 137 cases, of which 99 per cent showed connection with this particular milk supply These cases were scattered, not being limited to any section of town (except as hereinafter stated), nor to any church, school or social set The west side of town, inhabited chiefly by mechanics and laborers, gets its milk supply from local herds, and very little other milk was sold there Consequently few cases occurred there

The Chicago authorities did not prohibit the Wisconsin milk for more than a week after Dr Parkes acted, and as a consequence when the epidemic was subsiding in Evanston it was increasing in Chicago, until in two days more cases were reported than ever before

Finally, though the company in question has tried to make us believe that every precaution was taken to prevent infection we are convinced—to put it mildly—that they were mistaken. We have evidence that employés at the out of state plant and people on the farms from which the milk came were sick with scarlet fever

When Dr Parkes prohibited the receipt of milk from the suspected plant, the company attempted to ship butter and condensed milk in bottles from that station The Department of Agriculture informs me that bulk condensed milk, while heated to a degree sufficient to kill tubercle bacilli, is not sufficiently heated, probably, to kill other pathogenic germs

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Fig Packing in Smyrna.

FESHN EGYPT, Feb 14, 1907

To the Editor —During a trip to Turkey last fall I learned some interesting and disagreeable facts concerning the fig packing industry, especially at Smyrna Nothing about the factory was clean, neither the packers, the rooms nor the utensils The season, of course, is short and the packing employés are enlisted from the street rabble and are said to include many women of questionable character Those who have visited oriental cities know what the hygiene and physical conditions of the packers must be, coming from the most insanitary homes and belonging to a class where diseases of the most loathsome and infectious types run riot The figs are packed by hand (the stems being bitten off with the packers' teeth) and are molded with their hands and mouths During the process of packing the figs are dipped in sea water This water is taken from the bay at the very shore and is decidedly filthy Last year the Turkish government prohibited the use of water taken near the shore, but this, like all other orders of the Turks, was simply a device of the officials to extort money from the proprietors for the privilege of taking water from a more convenient place Between the packers' mouths and hands and the polluted waters of Smyrna Bay one may judge what wonderful possibilities there are of contracting diseases from eating "choice Smyrna figs"

Our government has taken the right course regarding pure-food products in the United States It certainly would be well to now turn its attention to those of foreign production and importation

H B HANSON

The Contro-Lateral Sign in Sciatica —Moutard Martin and Parmentier reported at the last meeting of the Soc. Méd d Hôp de Paris that in 5 cases of sciatica they noticed a hitherto unobserved form of the affection The patient reclines without support and the thigh on the sound side is raised and flexed on the pelvis as he lies still At a certain point the flexion causes a sharp pain in the buttocks on the affected side. The pain is produced at the sciatic point, but not always, and it may be met with both neuralgia and neuritis of the sciatic nerve They call the "induced contro lateral pain," and regard it as an important differentiating sign

Book Notices

ATLAS AND TEXT BOOK OF HUMAN ANATOMY By J Sobotta, Professor of Anatomy in the University of Würzburg Edited with additions by J P McMurrich A M., Ph.D., Professor of Anatomy in the University of Michigan Vols. I and II Vol. I Bones, Ligaments Joints and Muscles. With 320 Illustrations mostly in colors. Cloth Pp 258 Price $6 00 net. Vol. II Viscera Including the Heart Cloth. Pp 194 Price $6 00 net. Philadelphia W B. Saunders Company, 1906

In this book the text and atlas, which were published separately in the original German, are combined Two volumes of convenient size have already appeared, covering bones, ligaments and muscles in the first, and viscera, including the heart, in the second The vessels, nerves, etc, remain to be treated in forthcoming parts of the work.

The book is designed for students and practitioners rather than for specialists in anatomy, and is well adapted for its purpose The illustrations are numerous and well selected There are many lithographic plates which, in color and outline, reproduce more closely than those in most atlases the actual appearance of dissecting room preparations There are also a large number of extensive sections of the body in various planes These are well illustrated and are valuable in showing the relations of viscera and other structures in their natural positions undisturbed by dissection The representation of the individual bones of the skull each in a color of its own, in which it appears consistently throughout the series of pictures, is a good feature which should be of material help in the study of these structures The text is simple, clear and concise and has been translated into good English by Dr W H Thomas A number of brief additions inserted in small type by the editor of the American edition add materially to its interest, and should stimulate the student to further anatomic study Occasionally the results of recent anatomic investigation are introduced in this way, as for instance an account of the auriculo ventricular muscle bundle of the heart, Vol II, page 173

The nomenclature is based on the B N A, the names adopted by the committee of the International Anatomical Association, which met in Basel in 1895 This nomenclature is much the best which has yet appeared It was published entirely in Latin, and while something may be said in favor of translating the names into English in books for the use of English speaking students, such changes are always at the expense of conformity with international usage In this book some attempt has been made to adapt the Latin names to our vernacular Many of them are translated into English, many are dropped other names being substituted for them, while some are partly translated and left partly in their Latin forms Some of these changes make the names more readily intelligible, but some are at the expense of accuracy, e g, "greater tubercular ridge" for "crista tuberculi majoris," Figure 114 The ridge is not tubercular "Obturator foramen" is used instead of "foramen obturatum," Vol I, page 96 It is not logical to speak of a foramen as obturator, even though the term has been extensively used in English books Changes are sometimes at the expense of clearness, for instance, the use of the name "ulnar lateral carpal ligament," instead of "ligamentum collaterale carpi ulnare," Figure 203

The terms of direction and position are sometimes different from those of the B N A Thus the latter uses "externus" always to indicate position near the body surface, and "lateralis" always to indicate position relatively distant from the median plane of the body Lack of uniformity in the application and spelling of anatomic names is to be regretted, because the subject of anatomy is one especially adapted to develop in the student habits of accurate work and of accurate and definite statement of fact While the changes made are of some advantage in that the names are more intelligible the disadvantages seem more than sufficient to offset them, and on the whole the retention of the B N A terms and atlases of the international [illegible] would seem [illegible] in this country [illegible] authors [illegible] no [illegible] still

long usage. The book is a beautiful one with several new and valuable features, and is a distinct addition to the anatomic literature accessible in English.

PRECIS DE DIAGNOSTIC CHIMIQUE MICROSCOPIQUE ET PARASITOLOGIQUE par les docteurs Jules Guiart et L. Grimbert. 960 pp. avec 503 figures cartonné, 15 francs.

Among the numerous recent works in the general field of clinical diagnosis, this deserves prominent mention. Chemical, microscopic and parasitologic methods are coming daily into more general clinical use, yet students and investigators are confronted by the great difficulty that the desired data are scattered through such diverse and often inaccessible publications. This is peculiarly true of the parasitologic side of the question. That these authors, in spite of their incisive and condensed manner of presentation, have taken 960 pages to present a compendium, is at once evidence of the extent of the field and of their own command of it.

The work opens with two chapters on bacteriologic technic, after which are treated *seriatim* in distinct chapters the examination of the blood, pus, pathologic fluids, milk, nasal mucus, sputum, materials from the mouth, pharynx, stomach, intestine, liver, skin, ear, eye and genital organs, the urine and finally chemical reactions and tests. In each chapter the organ and its products, normal and abnormal, are discussed from the standpoint successively of chemistry, microscopy and parasitology, which latter term is taken to include bacteria, fungi and animal parasites. The methods recommended have been selected with a view to eliminate the more difficult or doubtful, and to present primarily such as are useable by the educated physician. Every effort has been exerted to make the compend thoroughly practical and, as the preface states, "even though a large number of physicians still disdain the methods of the laboratory, as incompatible with the exigencies of daily practice, it must be recognized that these methods demand increasing attention from the clinician mindful of his responsibility. To day the physician who holds to the ancient diagnosis may be compared to the surgeon who still smiles at antisepsis and asepsis."

The tables are numerous and well arranged and the illustrations abundant. In the latter color has often been used to good effect in the differentiation of such appearances as are presented by stained preparations. Some figures of the bacteria are, however, rather crude, and in general this group is the least satisfactorily illustrated.

The usual work on clinical diagnosis handles animal parasites in a very superficial and inadequate fashion. The reverse is true of the work under consideration. The detailed methods for conducting examinations, the structures available for differential diagnosis and the clinical importance of various species are admirably set forth. The illustrations are selected with care from the best authorities, though unfortunately their source is not always given, and the text represents the most recent discoveries in this rapidly expanding field. One can not help regretting the absence of references to the principal sources of information, but in a compendium, already at the maximum by virtue of the field covered, lack of space is probably a satisfactory explanation. American students and investigators will thank the authors for their service in producing so comprehensive and practical a work.

TOXINS AND VENOMS and Their Antibodies. By Em. Pozzi-Escot. Authorized Translation by A. I. Cohn, Ph.D. First Edition. Cloth. Pp. 101. Price, $1.00 net. New York: John Wiley & Sons. 1906.

This little book is a curiosity in its way. The complex subject of immunity, antigens and antibodies is discussed in a superficial, incomplete, and at times reckless manner. Thus we are told that a typhoid toxin is obtainable from the typhoid bacillus and that 'this toxin injected into guinea pigs, develops in them typhoid fever." Unintelligible phrases, such as "therapeutic diphtheritic toxin," "pathologic diphtheria," "antitoxic serums with a specific but transient immunity," "the serum of vaccinated rabbits is an antivenom toward erysipelas," etc., occur frequently. The translation may be responsible for some of these peculiarities, because it presents many evidences of having been made by one unfamiliar with the subject. Careful search fails to reveal a single reference to an American author.

Miscellany

Prevention of Yellow Fever in Havana

Dr. J. R. Kean, U. S. Army, adviser to the sanitary department of Cuba, now under the provisional administration of the United States, sends us the following interesting summary of the system for the prevention of yellow fever in Havana. As now in operation this comprises the following:

1. Methods to prevent the breeding of stegomyia. 2. Methods of disinfection to destroy infected mosquitoes when cases occur. 3. Methods for the detection and reporting of yellow fever.

1. This is recognized as the basic or fundamental procedure and is organized as follows: The city, which has a population of approximately 300,000, is divided into 42 districts, to each of which is assigned a district inspector, who makes house-to-house inspections. He is accompanied by two laborers, who carry cans of oil and a ladder for the purpose of inspecting tanks, gutters, etc. This inspector is in uniform and wears a badge bearing the seal of the sanitary department, he also has a written paper, showing his authority. He inspects his district, following the streets in prescribed order, and each afternoon leaves at the sanitary department a report showing the sanitary condition of each house inspected. The next morning he must begin his inspection at the house next to the one where his inspections of the preceding day terminated. Four special inspectors supervise the work of the district inspectors, two of them being medical officers of the U. S. Army. In addition to seeing that the inspectors fulfill the prescribed hours of work, they reinspect houses in the different districts which have been recently reported on by the district inspectors as being free from breeding places for mosquitoes. If larvæ are found on these premises they are collected and brought to the department as evidence against the district inspector, who, when convicted in this way of negligence, is punished first by stoppage of ten days' pay, and if the offense is repeated, by dismissal.

Mosquito work in Havana is simplified by its excellent water supply and the comparatively small number of cisterns. All *cisterns, cesspools and tanks are required by law to be* screened, so as to be mosquito-proof, and the enforcement of this sanitary ordinance is one of the special duties of the district inspectors. The fact that mosquitoes are being bred on the premises of any householder is a violation of the ordinances, which, after proper warning and explanation, is punished by a fine. This system of house-to house inspection has been in operation since November, and the people have become educated as to its object, so that there is now little friction produced by it, *and it is difficult to find either mosquito larvæ or adult* stegomyia in Havana or its suburbs.

One division of the mosquito work is devoted to the draining, or where this is not possible, the petrolization of ponds, pools or other collections of water in open lots, streets and fields, and consists of two petroleum brigades and two brigades for ditching and draining. The petroleum brigades also make systematic collection of tin cans, crocks, bottles and other rubbish which may collect water, and provide breeding places for mosquitoes.

2. The disinfecting brigades, which are three in number, are composed of trained men with overseers of long experience, and follow the technic which was devised by Col. W. C. Gorgas, now chief sanitary officer at Panama, who was chief sanitary officer of Havana in 1901. When a case of fever is reported which is regarded as suspicious, a disinfecting brigade proceeds at once to the house occupied by the patient, who is, if possible, first removed to the hospital for contagious diseases. If he can not be moved, his room is isolated and the rest of the house disinfected, together with all of the other houses in the immediate neighborhood. Sulphur is the fumigating agent habitually used, pyrethrum being used only in special cases where sulphur would by its injury to fabrics, furniture, etc., occasion serious financial loss. In such cases the mosquitoes are carefully collected and destroyed. The disinfecting squad is very thorough in its procedure of closing all cracks and openings. Large openings are closed by a specially made Manila paper or by canvas.

3 Physicians are required to report all suspicious cases, and also all cases of diseases such as dengue and influenza, which may be mistaken for it. Such cases when reported are seen by the board of diagnosis, which is composed of the chief sanitary officer, the director of the Hospital for Contagious Diseases, and three other distinguished physicians of Havana. If the physician prefers to do so, he can have his patient visited by two members of the board instead of the full board.

The great majority of non-immunes in Havana are Spanish immigrants, and these furnish the great majority of the cases of yellow fever. For example, of the 71 reported cases of yellow fever in Havana during the year 1906, all were Spanish except 8. Of the 41 cases reported from the rest of the island outside of the city of Havana in 1906, all were Spanish except one, who was a Cuban child. These Spanish immigrants have a custom which enormously contributes to the detection of cases of yellow fever and other contagious diseases among them. Each Spanish immigrant, on his arrival in Cuba, joins one of the cooperative societies or clubs, which are made up of the natives of the several provinces of Spain. Each one of these clubs supports a quinta or hospital, to which each member has the right to admission for treatment in case of sickness. These quintas are among the largest and best equipped hospitals in Havana. They are required to put all non-immune patients who have fever in screened wards, and to point them out to the medical inspector of the sanitary department, who visits each quinta daily. In this way the cases of yellow fever occurring among the Spanish non-immunes in Havana are in the great majority of cases isolated and recognized with a certainty which would otherwise be totally impossible, and so the failure on the part of physicians to report cases, which, of course, exists in Havana as in other cities, is minimized accordingly. A reliability is thus given to the sanitary reports of the city of Havana, which it would be very difficult for any other city of like size to obtain. There has been no yellow fever in Havana since December 8, except one isolated case, which occurred Dec. 24, 1906.

Peruna a Beverage, not a Medicine.—The test case brought by the New York State Commissioner of Excise to establish the character of peruna as a liquor and subject to all provisions of the law requiring the sale of whisky, brandy, wines, ale, beer, etc., was tried at Syracuse, Dec. 10-15, 1906, before Supreme Court Justice Rogers and a jury. Five of six bottles of peruna purchased by the commissioner were analyzed and the analysts testified that the preparation contained between 26 and 27 per cent. alcohol, and only traces of cubebs and ginger and a small percentage of solids not drugs. The contents of the sixth bottle and a part of one other bottle were given to the defendants for analysis by their chemist, whose analysis showed substantially the same results as obtained by the commissioner's chemists. Justice Rogers, to simplify matters for the jury, gave them the following list of questions:

1. Is the preparation contained in the five bottles of peruna produced by the plaintiff consisting of water, alcohol and certain drugs a proper remedy for the cure of Bright's disease?
2. Is the preparation contained in the five bottles of peruna a proper remedy for the treatment and cure of acute catarrh?
3. Is the preparation contained in the five bottles of peruna a proper remedy for the treatment and cure of chronic catarrh?
4. Is the preparation a proper treatment and cure for disease of the mucous membrane?
5. Was the quantity of alcohol 26 or 27 per cent. contained in the preparation in question necessary to hold the drugs actually put therein in the solution?
6. Was the quantity of drugs contained in one bottle of the alcohol diluted with water sufficient in amount in tablespoonful doses three or four times a day to produce any appreciable remedial effect?

The jury answered all six of the questions in the negative, deciding, in effect, that peruna is not a remedy for the treatment of any disease, and that it is so much a liquor that the sale should require a liquor tax certificate. The defendants were granted a thirty days' stay of execution and will appeal to the Appellate Court. The *Oil, Paint and Drug Reporter* states that since the case was commenced the Peruna Drug Manufacturing Company has changed the formula of the preparation so that another test case will be necessary to determine whether or not the amended peruna is a liquor or a medicine, and that this decision, therefore, applies only to the preparation which is now manufactured by another company according to the old peruna formula.

The Relation of Alcohol to Tuberculosis.—The criticisms by Wolff, in the *Beitr. z. Klin. d. Tuberkulose*, iv, 3, of the assumption that alcohol causes tuberculosis and should not be used in the treatment of this disease, have called forth a rejoinder in the *Prag. med. Wochschr.*, 1906, No. 12, by Holitscher. While it is difficult to draw a correct conclusion as to the etiologic rôle of alcohol in tuberculosis from general vital statistics, on account of the numerous factors to be taken into consideration, the statistics of certain trades such as brewers, distillers, waiters, etc., indicate that alcohol plays a certain direct part in the causation of consumption. Experiments also have shown that tuberculous animals die sooner when fed on alcohol. The large proportion of alcoholics found among phthisical patients, varying from 40 per cent. (Liebe) to 88 per cent. (Barbier, Rendu and Constan) is further evidence. The small number reported from certain clinics is probably due to the elastic use of the term "abuse of alcohol" by some observers. The value of these statistics, however, is impaired by the fact that the proportion of alcoholics to the entire population is not known. The indirect action of alcohol in producing poverty and other unfavorable influences should not be neglected, and its influence on posterity especially should be emphasized more than Wolff has done. In regard to the use of alcohol in sanatoriums for tuberculosis, Holitscher contends that its use at the table should be condemned and that whatever is given should be administered in definite doses as a medicine. He takes the view that although alcohol has been shown to be oxidizable in the organism, it ought not therefore to be regarded as a food any more than morphin. The use of alcoholic drinks in consumptive sanatoriums is unnecessary, and should be avoided, as the valuable hygienic lesson of the injurious effects of these drinks can be taught effectively by the example of these institutions. "To-day the indispensability of a 'moderate' use of alcohol is proclaimed by many. But it is not to be doubted that even this teaching, no longer in accord with the progress of science, will find its place among the obsolete, and the sanatorium barring alcohol will hold the field as the only justifiable and truly exemplary and hygienic one."

Restoration of Vision by Transplantation of Cornea.—Zirm gives an illustrated description in the *Wien. Klin. Wochenschr.* 1907, page 61, of what he styles the first successful graft of cornea in the human eye. He ascribes his success to the fact that he used the vigorous cornea from the eye of a lad of 11 just removed on account of injury from an iron splinter, and that he performed the operation during deep anesthesia without antiseptics, with the von Hippel trephine. The flap was kept between two pieces of gauze moistened with physiologic salt solution and was engrafted by manipulating the gauze to bring it into place without touching it with an instrument. The graft was held in place by two crossed threads passed through the conjunctiva of the eyeball. His patient had been blinded by a caustic in both eyes, and the graft has restored vision in the left eye so that his earning capacity is restored. The condition of the graft has remained satisfactory during the 13 months since the operation, but in the other eye it caused disturbances compelling its removal. The case was mentioned by our Vienna correspondent on page 812.

Injection of Fresh, Normal Serum to Arrest Hemorrhage.—P. F. Weil announces that he has found intravenous injection of 15 cc. of fresh blood serum, or twice this amount injected subcutaneously, by far the most effectual means to arrest hemorrhage. In hemophilia, in purpura, in pernicious anemia, accompanying purpura, in short, in all cases of a constitutional tendency to hemorrhage the effects realized were sometimes amazing, as he relates in detail in an article published in the *Tribune Médicale* for Jan. 12, 1907. The serum from man, rabbit, horse or beef serum all proved effectual, but a few by effects were observed with the latter, and he advises the u of human or rabbit serum freshly drawn. The abov [illegible] is for adults, half the amounts are s[illegible] explains the action of the serum as [illegible] of the coagulating ferment or [illegible] amount already present.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, CONTRACT PRACTICE INSURANCE FEES MEDICAL LEGISLATION ETC

PROPOSED OSTEOPATHIC BILLS

Persistent, Concerted Action by Osteopaths for Favorable Legislation in Many States

A summary of the present status of osteopathic legislation will not be without interest and profit Up to Jan 1, 1907, twenty nine states had adopted some provisions for the licensing of osteopaths Of these, eleven have adopted amendments to the medical practice act, authorizing the existing state board to examine and license osteopaths Three states have added an osteopath to the state board, in eleven states special osteopathic examining boards have been established, in three states osteopaths are exempt from the operation of medical practice laws, while in one state they are allowed to pursue their calling after registration in the office of the county clerk.

There are, then, twenty states in which no osteopathic legislation has as yet been secured In seventeen of these states the legislature is now in session, in twelve of these osteopathic bills were promptly introduced In addition, bills were introduced in seven states with a view to modifying existing osteopathic legislation From these facts, it might be claimed by the applicants for special legislation for osteopaths, that the simultaneous appearance of nineteen bills in one month is conclusive evidence of the universal and overwhelming demand on the part of the public for osteopathic legislation When, however, we examine the facts, this apparent demand, as far as the public is concerned, disappears On comparing the bills the surprising discovery is made that, although supposed to originate independently in state legislatures, separated in some cases by thousands of miles, these bills all bear the evidence of being the work of one hand For example, House Bill No 31, introduced Jan 14, 1907, in the legislature of the state of West Virginia, contains the following provisions

Section 1 provides for the appointment of a state board of osteopathic examination and registration of five members

Section 2 provides that any person, before engaging in the practice of osteopathy, shall make application for a certificate, stating name, age and residence, evidence of preliminary education, date of diploma of graduation from an osteopathic school, and name of the school of osteopathy from which the applicant graduated This section also provides that the board may, at its discretion, accept, as the equivalent of any part or all of the second, third and fourth requirements (that is, of all educational requirements) evidence of five or more years' practice of osteopathy The section further provides that the board may, at its discretion, dispense entirely with an examination in the case of an osteopath licensed to practice osteopathy in any other state or territory, whose requirements are of equal grade, or of any osteopath who has been in the actual practice of osteopathy for five years

Section 3, lest some one might be omitted and fail to come under the generous provisions of the preceding section, provides that any person over 21 may make application for a certificate and on examination may be licensed

Section 4 provides for fees

Section 5 specifies that osteopaths shall be subject to all state and municipal regulations regarding contagious and infectious diseases

Section 6 provides for recording certificates in the county clerk's office.

Section 7 provides penalties for the violation of the act

Section 8 specifically provides that osteopathy is not the practice of medicine although section 5 specifies that osteopaths shall observe and be subject to all state and municipal regulations the same as "physicians of other schools of medicine"

Section 9 provides for reports on the part of the officers of this board

In the Oregon legislature Mr Wilson introduced House bill No 236, Jan 23, 1907, entitled, "An act to regulate the practice of the system, method or science of treating diseases known as osteopathy, and creating a board of examination and registration of the same and providing for the violation of this act." In this bill the definition of osteopathy, which is found in section 8 of the West Virginia bill, is switched to section 1, and is considerably shortened, but the phraseology is identical Section 2 of the Oregon bill is, with the exception of some slight changes, identical in verbiage with section 1 of the West Virginia bill In like manner the succeeding sections of the bill coincide almost absolutely The Oregon bill gives the board authority to accept five years' experience in place of all educational requirements, and also makes it mandatory on the board to grant a license to any licensee of any other state The absolutely identical wording proves clearly that the Oregon and West Virginia bills both emanated from the same source Senate bill 5221, introduced by Senator Foraker of Ohio in the United States Senate, evidently emanated from the same source, although it was rewritten and differed somewhat in verbiage It provided for an osteopathic licensing board for the District of Columbia and contained the general reciprocity clause found in the other bills It also contained the following paragraph under section 8

> And said board of osteopathic examiners is further authorized and directed to issue in favor of its licentiates such certificates if any, as may be necessary to enable such licentiates, without examination to obtain license to practice osteopathy in other jurisdictions

It is evident that the object of the osteopaths in endeavoring to get a bill through Congress was to have Congress recognize osteopathy as well as to make certificates issued by the District of Columbia good all over the country This bill was killed in committee by a vote of two to one

Assembly bill No 61, introduced into the California legislature by Mr Lemon, Senate bill No 21, introduced in Illinois by Mr Chafee, House bill No 66, introduced in Illinois by Mr Allen, House bill No 790 Massachusetts, House bill No 690, Pennsylvania, Senate bill No 28, Utah, all possess the same general characteristics A number of the bills contain some special features which are interesting For instance, the Illinois bill provides that "any person within thirty days after the organization of the board, holding a certificate to treat human ailments without the use of medicine and presenting such certificate, shall be licensed by the board, provided he files a certificate of the Illinois Osteopathic Association, setting forth that he is a graduate of a reputable school of osteopathy, etc"

However, all the bills provide for a separate board of osteopathic examiners and for an examination before licensing, but with so many exemptions as practically to nullify the examining features Each one of them, except the District of Columbia bill, contains a specific definition of osteopathy and specifies that it is not, in any sense, the practice of medicine and each provides for unlimited license without examination of any person already licensed in any other state "having an equal standing" As this clause appears in all of these bills this provision practically means that, having been licensed in one state, there is no limit to the extension of the right of the individual to practice osteopathy

It is evident that this simultaneous flood of practically identical osteopathic bills is the result of a well planned effort to secure, in each state, legislation which will give the individual osteopath all the privileges of a member of the medical profession, while expressly stating that he is not practicing medicine In addition, these bills provide for unlimited and practically universal reciprocity, and also permit the board to substitute a variety of other qualifications for the educational requirements, thus allowing the licensing of practically any one whom the board may wish to license

Society Secretaries to Confer

Dr John B Donaldson, the secretary of the Washington County (Pa) Medical Society, having been requested to arrange for a meeting of secretaries of county societies at the Reading meeting of the state society, September 23 26, has issued a circular letter to the county secretaries urging them to be present and to utilize the features of the meeting The idea of such a meeting of county secretaries is excellent and should be made a regular feature of every state society meeting As Dr Donaldson well says, "a great deal depends on the secretary" The results of this innovation will be carefully watched and, we hope, imitated by other state societies

Medical Education and State Boards of Registration

COMING EXAMINATIONS

IOWA Board of Medical Examiners, Des Moines March 19-21 Secretary Dr Louis A. Thomas Des Moines.

OKLAHOMA Board of Medical Examiners Guthrie March 26-27 Secretary Dr J W Baker Enid

UTAH State Board of Medical Examiners Salt Lake City April 1 Secretary Dr R W Fisher Salt Lake City

ARIZONA Board of Medical Examiners Phoenix, April 1 2 Secretary Dr Ancil Martin Phoenix

COLORADO State Board of Medical Examiners Denver April 2 Secretary Dr S D Van Meter 1723 Tremont St Denver

IDAHO State Board of Medical Examiners Boise April 2 Secretary Dr J L. Conant, Jr Genesee

MINNESOTA State Board of Medical Examiners the Old Capitol St Paul April 2 Secretary Dr W S Fullerton St Paul

MONTANA State Board of Medical Examiners the Capitol Helena April 2 Secretary Dr W C Riddell Helena.

WEST VIRGINIA State Board of Health Wheeling April 2 Secretary Dr H A Barbee Point Pleasant.

GEORGIA ECLECTIC Board of Medical Examiners Senate Chamber State Capitol Atlanta first week in April Secretary Dr L. F Bugg Madison.

GEORGIA Regular Board of Medical Examiners Capitol Building Atlanta first week in April Secretary Dr E R. Anthony Griffin

KENTUCKY State Board of Health City Hall Louisville, April 2 3 Secretary Dr J N McCormack Bowling Green

NORTH DAKOTA State Board of Medical Examiners Grand Forks, April 2-4 Secretary Dr H M. Wheeler Grand Forks

RHODE ISLAND State Board of Health State House Providence April 4. Secretary Dr Gardner T Swarts Providence

ARKANSAS State Medical Board, Little Rock April 9 Secretary Dr F T Murphy Brinkley

ARKANSAS Homeopathic Medical Board Little Rock April 9 Secretary Dr V H Hallman Hot Springs

DISTRICT OF COLUMBIA Board of Supervisors in Medicine Washington April 12 Secretary Dr Geo C Ober Washington

CALIFORNIA State Board of Medical Examiners San Francisco April 16 Secretary Dr Chas L. Tisdale San Francisco Cal

MISSOURI State Board of Health, St Louis and Kansas City April 16-18 Secretary Dr J A B Adcock Warrensburg

ILLINOIS State Board of Health Great Northern Hotel Chicago April 17 19 Secretary Dr J A Egan Springfield

TEXAS State Board of Medical Examiners Austin April 30 May 2 Secretary Dr T T Jackson San Antonio

TEXAS Eclectic Medical Board Dallas about April 25 Secretary Dr L S Downs Galveston.

Amended Law in West Virginia.—Dr S L Jepson member of the West Virginia State Committee on Medical Education writes that an amendment to the Medical Practice Act has been secured which provides that hereafter, to obtain a license to practice medicine in West Virginia, the candidate must be a graduate of a "reputable medical college recognized as such by the State Board of Health" Another amendment makes provision for reciprocity

Increased Entrance Requirements.—The faculties of the following colleges have voted to require a preliminary year in physics, chemistry, biology and languages to apply to all students beginning medical study after Jan 1, 1910

Illinois Medical College Chicago
College of Medicine and Surgery Chicago
Kansas Medical College Topeka
Oakland College of Medicine and Surgery California
American College of Medicine and Surgery Chicago (effective 1908)

Graduation Required in Hawaii.—Dr George Herbert, chairman of the Board of Medical Examiners, and Dr F Howard Humphris, secretary of the Hawaiian Territorial Medical Society state that in order to practice medicine in Hawaii the candidate must have graduated from a medical college having not less than four years of study

Higher Entrance Requirements in Minnesota.—By a recent ruling of the Minnesota State Board of Medical Examiners "beginning June 1911, all applicants for license to practice medicine in that state, graduating in that or a subsequent year, must have satisfied all the entrance requirements and completed the first two years' work of the College of Science Literature and the Arts of the University of Minnesota or present credits for a course elsewhere which is ruled by the said college as equivalent thereto, provided, that a medical student may be matriculated with a condition in not more than one full year subject or two half year subjects" All conditions must be removed before beginning the second course in medicine This ruling therefore applies to all students *matriculating* for the session of 1907 S or thereafter

Another ruling restores the one year residence clause to the conditions for reciprocity

Marriages

J A PACKER, M.D Selma, La., to Miss Mattie Adams of Lovelady, Texas, March 3

L P SPRAGUE M D, Rutland, Vt., to Miss Maude Thurber of Brainardsville, N Y, recently

CARL P STRUVE M.D South Elgin, Ill, to Miss Jessie Margaret Burns of Chicago, February 24

ISAAC EUGENE NERVIG, M.D to Miss Edna Shadle, both of Sioux City, Iowa, at Harvey, Ill, March 2

FRED B TAPLEY, M.D, Sacramento, to Miss Alice Stewart of Amador County, Cal, at Vallejo, Cal., recently

BENNETT GROVE WILLIS, M D., Hartington, Neb, to Miss Maud Elizabeth Ray, at Omaha, Neb, February 6

JOHN HENRY WADE, M.D, Ashland, Ky to Mrs Edith Stephens of near Point Pleasant, W Va., February 26

RAYMOND FRANKLIN METCALFE M D, captain and assistant surgeon, U S Army, to Mrs Gertrude Marshall Beverly of Columbus, Ohio in New York City, February 27

Deaths

Benjamin Franklin Price, M D Cincinnati College of Medicine and Surgery, 1873, a member of the American Medical Association, a veteran of the Civil War, for 25 years a resident of Braddock, Pa, one of the organizers of the Braddock Medical Association, and a founder of the Braddock Hospital, for six years the president of the local board of health and for one term a councilor, died at his home in Portland, Ohio, February 22 from tuberculosis, after an illness of more than a year, aged 61

Albon Z Howard, M D Keokuk Medical College, College of Physicians and Surgeons, Keokuk, Iowa, 1879 a member of the American Medical Association Oshkosh Medical Club, and Brainerd District Medical Society, a well known specialist on diseases of the stomach and nervous system, of Oshkosh, Wis, died at his home in that city, February 24 from diabetes, after an illness of one year aged 54 At the funeral members of the Oshkosh Medical Club acted as pall bearers

George Bingham Fowler, M.D College of Physicians and Surgeons in the City of New York, 1871, a member of the state and county medical societies, health commissioner of New York City under the administration of Mayor Strong, founder of the *Dietetic Gazette*, and for six years associate editor of the *American Journal of Obstetrics* died at his home in New York City, from hemorrhage of the stomach, March 6, aged 59

George C Lewis, M.D Medical College of Ohio, Medical Department of University of Cincinnati, 1875, a member of the state and county medical societies, for eight years coroner of Jefferson County Ind., died suddenly from heart disease, at his home in Madison February 27, aged 51 At a special meeting of the Jefferson County Medical Society appropriate resolutions regarding the death of Dr Lewis were adopted

David G Linvill, M.D Western Reserve University Medical College, Cleveland Ohio, 1849 a member of the state and county medical societies said to have been the oldest practitioner of Northern Indiana and a pioneer of Whitley County, where he had lived for more than 60 years, died at his home in Columbia City from senile debility, after an illness of two weeks February 18, aged 86

Eugene Marguerat, M D New York University Medical College, 1859 a member of the state medical society, and in 1868 president of the Cook County Medical Society a surgeon in the Army throughout the Civil War and one of the best known practitioners of Chicago, died at his home, March 7 from cerebral hemorrhage, after an illness of one week, aged 78

Lewis Frederick Suesserott, M.D University of Pennsylvania, Department of Medicine Philadelphia 1879 a member of the state and county medical societies from 1886 to 1902 coroner of Franklin County, Pa., and for six years physician to the jail died at his home in Chambersburg, Pa, March 2 from pleuro pneumonia, after an illness of four days, aged 50

William R. Blakeslee, M.D New York University New York City 1875, a veteran of the Civil War, formerly a practitioner of Virginia and a member of the medical society of that state and of Pennsylvania, who recently returned from a trip to British Guiana where he had arch lth, died February 26, at his office in Lest

Clifton Scott, M.D Kentucky will 1883, a member of the Amer for

merly professor of science in Highland Park College, Des Moines, Iowa, died at Mercy Hospital, Des Moines, February 27, from pneumonia following an attack of cerebral hemorrhage, after an illness of one week, aged 54

Elisha E Mullinix, M.D University of Maryland School of Medicine, Baltimore, 1874, a member of the American Medical Association, a member of the staff of the Frederick City Hospital, and one of the most esteemed practitioners of Frederick County, Md., died at his home in Urbana, March 5, from pneumonia, after an illness of one week, aged 56

Ryan G Mendenhall, M.D University of Michigan Department of Medicine and Surgery, Ann Arbor, 1867, New York University Medical College, New York City, 1872, for two terms a member of the state legislature from Linn County, Kan and at the time of his death mayor of La Cygne, died at his home, February 27, from heart disease

William Henry Johnston, M.D Bellevue Hospital Medical College, New York City, 1871, a member of the state medical society and once president of the Lewis County Medical Society, a veteran of the Civil War, died at his home in Port Leyden, N Y, March 1, after an illness of more than a year, aged 66

Columbus Hixson, M.D Miami Medical College, Cincinnati, 1866, for more than 30 years a practitioner of Kansas City and one of the founders of Kansas City Medical College, died at the General Hospital Kansas City, March 6, five days after injuries received by being run down by a hack, aged 80

Thomas Crawford McNeill, M.D University of Pennsylvania, Department of Medicine, Philadelphia, 1860, a surgeon in General Forrest's cavalry during the Civil War, died at his home in Paris, Tenn, February 9, from paralysis, after an illness of more than four years, aged 77

Austin F Denlinger, M D University of Michigan, Department of Medicine and Surgery, Ann Arbor 1883, a member of the medical pension examining board of Carbon County, Pa, died at his home in Lansford March 1, from hemorrhages, after an illness of two days, aged 50

Jacob Kulp Cassel, M D Pennsylvania Medical College, Gettysburg 1871, assistant surgeon of the Fifty seventh Pennsylvania Volunteer Infantry during the Civil War, died at his home in Philadelphia, March 2, after a short illness, aged 72

William S D Johnson, M.D Medical Department of the University of Missouri, St Louis, 1850, for many years a practitioner of La Belle, Mo, died at the home of his son in Versailles, Ill, February 22, after an illness of five days, aged 83

William Aaron Butman, M.D Baltimore Medical College, 1898, secretary of the Boston Medical Society from 1902 to 1905, died at his home in Somerville, Mass, February 11 from tuberculosis, after an illness of several years, aged 37

George A. Hayunga, M.D New York University, New York City, 1863, a surgeon in the United States Navy from 1861 to 1866, and thereafter a practitioner of New York City, died at the home of his nephew in New York City, March 6, aged 67

Conrad Karges, M.D Washington University, Medical Department, St Louis 1883, for many years mortuary clerk in the St. Louis health department, died suddenly at his home in St Louis, February 24, from heart disease, aged 58

William Henry May, M.D College of Medicine, Syracuse (N Y) University 1890, a member of the state and county medical societies, bacteriologist of Syracuse, N Y, died in a hospital in that city, March 2, after an operation, aged 42

Horace Still, M.D Hahnemann Medical College and Hospital Philadelphia, 1877, for several years a member of the local school board died at his home in Norristown, March 1, from influenza, after an illness of one week, aged 51

Hance C Chesney, M.D Medical College of Fort Wayne, Ind 1883, for several years justice of the peace at Custer City, Pa, died at his home in that place, March 1, from uremia, after an illness of two days, aged 44

Otto F Voigt, M.D American Medical College, St Louis, 1886, died at his home in Bailey's Harbor Wis., February 23, from heart disease, seven weeks after a fall in which he sustained severe injuries, aged 62

D G Shirley, M.D University of Tennessee, Medical Department, Nashville, 1888, a member of the state and county medical societies, a practitioner of Tyler, Texas, died in West Dallas, February 25, aged 47

James L Carr, M.D Cincinnati College of Medicine and Surgery, 1877, a member of the state and county medical societies, of Monon, Ind., died suddenly from heart disease at that place, February 22.

Oscar A. Armstrong, M.D Medical Department of Fort Worth (Texas) University, 1899, died at his home in Neola, Texas, February 1, from pneumonia, after an illness of eleven days, aged 32

George Lee Fife, M.D Western Pennsylvania Medical College, Pittsburg, 1890, died at his home at Blair Station, Pa from pneumonia, February 26, after an illness of four days, aged 39

Frederick G Merrill, M D Bellevue Hospital Medical College, New York City, 1879, of New York City, died from uremia, at the home of his brother in Skowhegan, Me, February 25, aged 51

Frank W Homer, M.D Hahnemann Medical College and Hospital, Chicago, 1897, of Spokane, Wash, died at his farm on White Bluff Prairie, from nephritis, February 23, aged 38

James C Flynt, M.D University of Louisville (Ky) Medical Department, 1878, died at his home in Gurley, Ala, from influenza, after a long illness, February 25, aged 71

Mortimer F Sweeting, M.D New York Homeopathic Medical College and Hospital, 1850, died suddenly from pneumonia, at his home in South Butler, N Y, aged 80

Hamilton J Coffroth, M.D University of Maryland School of Medicine, Baltimore 1879, of Greensboro, Md, died at the University Hospital, Baltimore, March 7, aged 50

Joseph D Livezey, M.D University of Pennsylvania Department of Medicine, Philadelphia, 1871, died at his home in Philadelphia, February 25, aged 65

Albert W La Wall, M D University of Buffalo, Medical Department, 1897, died at his home in Scio, N Y, February 22, from heart disease, aged 33

Charles Reed, M D College of Physicians and Surgeons in the City of New York, 1879, died at his home in Brooklyn, March 5, from pneumonia, aged 51

William Clay McGee, M.D Baltimore Medical College, 1894, died at his home in Canton, Ohio, February 1, after an illness of four weeks, aged 39

James L Williams, M.D Miami Medical College, Cincinnati, 1876, died at his home in Indianapolis, February 27, after a long illness, aged 67

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

KENTUCKY PRESIDENTS OF THE AMERICAN MEDICAL ASSOCIATION

SPRINGFIELD ILL. Feb 27 1907

To the Editor —Some years ago I saw the statement that a larger percentage of ex presidents of the Association were either natives of Kentucky graduates of Kentucky schools or connected with Kentucky schools than from any other state. Can you give me any information on this subject? H J

ANSWER —Ten ex presidents of the American Medical Association are or have been associated with Kentucky

At the twelfth annual meeting held in Louisville Ky in 1859 Dr Henry Miller of that city was elected president. Dr Miller was born in Glasgow, Ky Nov 1 1800 and died in Louisville Feb 8 1874 He was professor of obstetrics in the University of Louisville.

At the nineteenth annual meeting held in Washington D C in 1868 Dr William O Baldwin of Montgomery Ala. was elected President. Dr Baldwin was born in Montgomery Aug 9 1818 and died in the same city May 30 1886 He was graduated in medicine from Transylvania University Kentucky in 1837

At the twenty second annual meeting held in San Francisco 1871 Dr David W Yandell of Louisville was elected president Dr Yandell was born in Murfreesboro Tenn, April 4 1826 He was professor of surgery in the University of Louisville and died in Louisville May 3 1898

At the twenty-eighth annual meeting held in Chicago 1877 Dr Tobias G Richardson, of New Orleans was elected president. Dr Richardson was born in Lexington Ky and was graduated from the University of Louisville in 1848 He died in New Orleans May 26 1892

At he thirtieth annual meeting held in Atlanta Ga in 1879 Dr Lewis A. Sayre, of New York City was elected president Dr Sayre was born in New Jersey in 1820, and was graduated from the Transylvania University Ky with the degree of A.B in 1839 His medical education was obtained at the College of Physicians and Surgeons in New York

At the thirty first annual meeting held in New York City, in

1880 Dr John T Hodgen of St. Louis was elected president. Dr Hodgen was born in Hodgenville Ky Jan 17 1826 and died in St. Louis, April 28 1882.

At the thirty seventh annual meeting held in St. Louis in 1886 Dr Elisha H Gregory was elected president Dr Gregory was born near Russellville, Ky Sept. 10 1824 and was graduated from the St Louis University in 1840

At the forty first annual meeting held in Nashville Tenn in 1890 Dr William T Briggs of Nashville was elected president. Dr Briggs was born in Bowling Green Ky Dec. 4 1829 and died at Nashville, June 13, 1894

At the forty ninth annual session held in Denver 1898 Dr Joseph McDowell Mathews, of Louisville, was elected president. Dr Mathews was born in Newcastle, Ky in 1847 and was graduated from the University of Louisville in 1867

At the fifty fifth annual session held at Atlantic City Dr Lewis S McMurtry of Louisville Ky was elected president. Dr McMurtry was born in Central City Ky and was graduated from Tulane University in 1873

COMPOSITION OF KARGON

ST LOUIS, March 4 1907

To the Editor —Can you give me any information regarding the composition of Kargon one of the ingredients of a prescription advertised in the daily press as a simple home mixture which any druggist can put up? M. J

ANSWER.—From the reports of our chemists who analysed this nostrum it appears to contain potassium acetate and buchu as the essential constituents One chemist concludes his report as follows This wonderful remedy then, seems to be acetate of potash about 15 grains to each teaspoonful and fluid extract of buchu Another chemist states Kargon contains buchu, potassium acetate, glycerol and 18 per cent. alcohol

The nostrum is put up by the Kargon Extracting Company of Cincinnati, the title extracting" evidently referring to the process to which the gullible public's purse is subjected. The mixture is advertised as 'being composed of common everyday vegetable (?) ingredients as being better than patent medicines which are largely alcoholic concoctions. The method of advertising is as ingenious as it is misleading Appearing in many cases, as solid reading matter it discourses on the importance of the free action of the kidneys as an essential to health. A harmless-looking prescription is then given consisting of Fluid Extract of Dandelion Compound Kargon and Compound Syrup of Sarsaparilla, which can 'be procured from any good pharmacist and mixed at home The Compound Kargon is always carefully sandwiched between the two pharmacopeial preparations with but one evident object in view that of leading the public to suppose that Kargon is but one of the numerous standard diuretics Of course a combination of acetate of potash and fluid extract of buchu with fluid extract of dandelion and compound syrup of sarsaparilla makes an active diuretic. But it is a combination that in the majority of cases of kidney disease will do great harm And no matter what the conditions if used indiscriminately and taken regularly as the advertisements advocate, it can not be otherwise than dangerous.

THE SPRAGUE MERCANTILE AGENCY

CALDWELL IDAHO Feb 16 1907

To the Editor —Last summer a representative of the Sprague Mercantile Agency of Chicago Ill., called on me and exhibited some very doubtful accounts which they claimed to have been successful in collecting I gave them about $1 000 worth of accounts to collect for me with the following result They induced one debtor to pay me $60 I had previously had to pay a membership fee of $50 and also $1 50 interest on the note for fee for ninety days in addition there was $9 to pay as 15 per cent. on the $60 collected. I was thus 'out fifty cents for collecting the $60 They then collected from another debtor $41 which they failed to account for They wanted me to give them unlimited power to collect and have me pay after collections were made this I refused to do They already have $101 or 10 per cent. of the face value of the accounts, and I have nothing J J HAMILTON M D

[This seems to be in line with the experience of some of the correspondents of the *Medical World* this journal which has exposed other concerns, published some letters from physicians who complained bitterly of the methods pursued by the Sprague agency These letters expressed the opinion that the membership fee which was exacted, constituted the most important thing—to the agency and the correspondents seemed to be unanimous in characterizing the company in terms that were anything but complimentary —ED]

THE BABINSKI REFLEX

——— IND March 5 1907

To the Editor —Please explain the so-called Babinski reflex How is it elicited and what does it indicate? B

ANSWER.—This reflex first described by Babinski in 1896 consists in deliberate extension of the toes and especially of the great toe, followed by dorsi flexion of the ankle joint when the sole of the foot is gently or firmly stroked. This sign is generally associated with disease of the anterior columns of the spinal cord—the pyramidal tracts. It is always pathologic except in very young children, not yet able to walk, in whom a similar but more rapid response is obtainable Walton and Paul, however after an extensive investigation reported (*Jour Nerv and Ment Dis* June, 1900) that in early infancy no constant or characteristic movement of the toes occurs though extension is rather more common than flexion. They also state that the Babinski sign occurs in about 70 per cent. of all cases of paraplegia and in about the same proportion of cases of disease of the pyramidal tracts. In the latter condition it is often the first symptom to appear

VACCINE FROM MICROCOCCUS NEOFORMANS.

——— FEB. 21 1907

To the Editor —Please give in your Queries and Minor Notes the method employed in preparing the vaccine from cultures of *Micrococcus neoformans* for the treatment of cancer X Y Z.

ANSWER.—The *Micrococcus neoformans* was discovered according to Doyen by himself in 1895 and was frequently observed by him in tumors both benign and malignant until in 1900 he succeeded in cultivating it. He claims that it has been found in tumors in all parts of the world by observers who have followed his technic which he described in a communication to the Paris Academy in 1901 He prepares his vaccine as follows.

A bouillon from the breast of a cow in lactation is inoculated with a piece of a malignant tumor or with cancer juice The bouillon should be peptonized and contain 1 per cent. of glucose, although the latter is not essential. From two to two and one-half years are necessary to obtain the toxin The cultures must be renewed once in two months and it is necessary to precede each new inoculation of the bouillon by a passage of the micro-organism through a susceptible animal preferably the white mouse. Great care must be used in the cultivation as the slightest variation in the temperature of the oven or in the composition of the bouillon may cause poor development or death of the micro-organism. Two forms of toxin are prepared 1 a pure form obtained after 12 to 18 months of culture, and 2 an attenuated form which is produced by treating the culture with 7 per cent. of quinin hydrochlorid .2 per cent. of cacodylic acid and 2 per cent. of methylarsenic acid which must be added under strict aseptic precautions Two kinds of vaccine must be prepared It is dangerous to employ for these vaccines young cultures they must be at least 2½ years old The weaker vaccine is prepared by heating the cultures for two days to a temperature of 45 C (113 F) and the stronger by heating the same cultures to a temperature of 40 C (104 F) for the same time

Criticism of Doyen's claims has been made by French surgeons and a commission appointed by the French Congress of Surgery in 1904 reported in 1905 somewhat unfavorably as to his clinical results. His more recent work is summarized in his address to the French Congress of Surgery Oct 1 to 6 1906 and in a report by Cornil to the *Berliner klinische Wochenschrift* (Feb 4 1907) Doyen refers to the work of Ehrlich who has demonstrated the transformation of epithelioma into sarcoma after several passages through white mice. Immunization was obtained which seemed to be equally effective against both sarcoma and epithelioma. Doyen believes he has been able by means of the micro-organism of neoplasms (*Micrococcus neoformans*) to produce in the white rat several varieties of epithelioma and of enchondroma and in the white mouse a melanotic sarcoma. He thinks that it is necessary at present to admit the etiologic identity of sarcoma and carcinoma The treatment of cancer by vaccines prepared from attenuated cultures of the *Micrococcus neoformans* has been undertaken by several experimenters including Wright and the results have been very uniform and demonstrate that it is possible from a pure culture of *M neoformans* to prepare a vaccine which produces favorable changes in case of cancer that have not been obtained by any other method It is possible to determine the true value of the treatment by Wright's opsonic method and to regulate the therapeutic use of the vaccine for each patient Doyen reported 64 cases (*Semaine méd* 1905 p 490) and has recent reports of 76 more in which the results have been very satisfactory Of the 19 patients who were living June 30 1906 3 have since succumbed in two the cancer having invaded the pleura before the beginning of the treatment, of the 16 surviving cases only two are in a serious condition Doyen relates some remarkable cases and expresses the opinion that it is possible to arrest the progress of cancer in certain cases and that injection alone may cure cases in which surgery is impotent

In the discussion Cazin took exception to the assumption of Doyen that sarcoma and carcinoma except in mixed tumors showed any signs of a mutual transformation

Cornil gives a critical estimate of Doyen's work which he divides into that relating to his serum treatment and that with the cause

tion of cancer In regard to the former he cautions us that too early conclusions should not be drawn Doyen operates before instituting the serum treatment when operation is possible. By injections of cultures of the micrococcus Doyen claims that he has been able to obtain tumors in white rats and mice but never in dogs or other animals Although the tumors produced by the injection showed the histologic character of malignant growths they failed to follow the clinical course of such tumors in their spread to the lymph glands and other organs. It may be that the animals experimented on died too soon for such results to follow It can not be said therefore, that Doyen has produced cancer, but only cancer like tumors

Jacobs and Geets (*Lancet* 1906 I, 964 966) state The researches which we have made in connection with cancer have convinced us (1) that we have in cancerous cachexia a specific microorganism the *Micrococcus neoformans* of Doyen (2) that the anti cancerous sera of Doyen with which we have experimented are wholly useless and (3) that it is practicable to immunize the human organism by means of a series of inoculations of the *Micrococcus neoformans* vaccine provided that these are properly controlled by examinations of the opsonic power of the blood They propose the employment of a vaccine made from cultures of the same age (as those used by Doyen?) sterilized at 60 degrees C washed freely and standardized by the enumeration of the bacilli as advocated by Wright.

Those interested in this subject are referred to the following bibliography

Doyen Le Micrococcus Neoformans et les Neoplasmes, Par 1903 Sleicher frères et Cie.

Doyen Presse Médicale, 1904 II 671

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Doyen Le micrococcus neoformans Bull. et mem Soc. anat. de Par, 1905 lxxx, 457-460 also 467 529 534 Rev de therap med chir Par, 1905 lxxii 226 230

Doyen Bull med. Par 1904 xviii 909 Bull et mem Soc. anat. de Par 1905 lxxx, 207 209 Bull et mem. Soc. de chir de Par 1905, n s. xxxi 698 782.

Doyen Rev de Therap med. chir 1904, lxxi 721 731 Semaine medicale 1905 490 also Oct. 10 1906

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The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U S Army week ending March 9 1907

Carroll James surgeon appointed surgeon with the rank of major from March 2 1907

McAlister John A. dental surgeon, left Presidio of Monterey Cal for Fort Sheridan, Ill for duty

Stallman George L dental surgeon ordered from Fort Sam Houston Texas, *to Fort McIntosh Texas, for duty*

Millikin John D dental surgeon returned to Fort Leavenworth Kans from duty at Fort Riley Kans and ordered to Fort Des Moines, Iowa, for one month, and Fort Omaha, Nebr for twenty days.

Gregory Verdo B contract surgeon relieved from duty at Fort Adams, R I and ordered to Janesville Wis for annulment of contract

Chase, Alpha M contract surgeon, returned to duty at Fort Sam Houston Texas from leave of absence

Navy Changes

Changes in the Medical Corps U S N for the week ending March 9, 1907

Schwerin L H acting asst surgeon additional duty on board the *Florida*

Plummer R W P A. surgeon detached *Denver* to Chicago Recruiting Station

Stepp J., P A surgeon detached *Don Juan de Austria* to *Denver*

Shaw H P A surgeon commissioned P A surgeon from Oct. 28 1906

Jenness, B F., P A surgeon commissioned P A surgeon from Nov 11 1906

Hyden R Valz E V Smith F W asst. surgeons appointed asst surgeons from March 5 1907

Schwerin L. H., acting asst. surgeon detached temporary duties on *Florida* to resume duties Naval Hospital Norfolk Va.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended March 6 1907

Stoner G W surgeon granted leave of absence for two days in February, 1907, under the provisions of Paragraph 189 of the Regulations.

Rosenau M J P A surgeon directed to proceed to Harrisburg Pa for special temporary duty on completion of which to rejoin his station in Washington

Burkhalter J F, P A. surgeon granted leave of absence for two days in February 1907, under the provisions of Paragraph 191 of the Regulations

Salmon T W asst surgeon granted leave of absence for one day in February 1907 under the provisions of Paragraph 191 of the Regulations

Frost, W H asst surgeon granted leave of absence for one day

de Valin Hugh asst surgeon granted leave of absence for one day under the provisions of Paragraph 210 of the Regulations

Kennard, K S, acting asst surgeon granted leave of absence for one day in February, 1907 under the provisions of Paragraph 210 of the Regulations.

McLarty A A acting asst surgeon, granted leave of absence for 30 days from February 26

Stearns H H acting asst surgeon granted leave of absence for two days in February under the provisions of Paragraph 210 of the Regulations

Wilson J G acting asst surgeon granted leave of absence for three days in February 1907 under the provisions of Paragraph 210 of the Regulations

Wilson R acting asst. surgeon excused from duty for a period of 15 days without pay from March 16 1907

Health Reports.

The following cases of smallpox yellow fever cholera and plague have been reported to the Surgeon General Public Health and Marine Hospital Service, during the week ended March 8 1907

SMALLPOX—UNITED STATES

California *Los Angeles, Feb 16-23 2 cases.*
Florida Jacksonville Feb 16 23, 1 case.
Georgia Augusta Feb 19 26 2 cases
Indiana Indianapolis, Feb 17 24, 1 case La Fayette Feb 18 25 2 cases.
Iowa Cedar Rapids Feb 1 28 1 case Davenport, Feb 14 28 3 cases Des Moines Nov 22 Feb 22, 16 cases North English, Dec. 1 Feb 10 75 cases
Louisiana New Orleans Feb 15 22 8 cases 1 death.
Michigan Detroit Jan 26-Feb 2, 8 cases Feb 9 23 13 cases.
Missouri St. Joseph Feb 16 23 25 cases St Louis, Jan 26-Feb 2 1 case.
New York New York Feb. 16-23 1 case.
North Dakota General, Sept. 1 30, 4 cases 1 death Oct. 1 31 14 cases.
Ohio Cincinnati, Feb 22 March 1 1 case
Oregon Milton Jan 16-Feb 23 16 cases
Pennsylvania Homestead Feb 14-28, 2 cases
South Dakota Sioux Falls Feb 16-23 1 case.
Washington Spokane Feb 18 23 10 cases Tacoma Feb 2 9 1 case
Washington Spokane, Feb 16-23 10 cases Tacoma, Feb 2 9 1 case
Wisconsin La Crosse Feb 16-23 1 case Milwaukee 9 cases

SMALLPOX—FOREIGN

Africa Cape Town Jan. 12 19 1 case.
Argentina Buenos Ayres, Jan 5 12 8 cases
Brazil Rio de Janeiro, Jan 13 20 3 cases 1 death
Canada Nova Scotia Digby County Feb 23 present Halifax, Feb 16-23 (on S S *Pomeranian*) 1 case (imported) Toronto Feb 16-23 2 cases Yarmouth County Feb 23 present
Chile Coquimbo Feb 2 25 cases 1 death Iquique present
China Hongkong Jan 12 19 3 cases 2 deaths
Ecuador Guayaquil Jan 1 31 23 deaths Jan 26-Feb 9 3 deaths
France Paris Feb 2 9 7 cases
Great Britain Bristol Feb 2 9 2 cases Cardiff 4 cases 1 death Liverpool, 1 case Manchester 1 case Southampton 1 death
Italy General Jan 31 Feb 7, 8 cases
Luxemburg Canton Remich Jan 26 Feb 9 12 cases
Madeira Funchal Feb 10 17 1 case 1 death
Mexico Aguas Calientes Feb 9 16 8 deaths
Netherlands Flushing Feb 9 16 2 cases
Persia Gilan Province Nov 1 30 present Kermanshah present Mash Had Dec. 31 present Tourmat i Haidari Oct 1 Nov 20 56 cases
Russia Odessa Feb 2 9 19 cases 4 deaths St. Petersburg Jan 26-Feb 2 1 case.
Spain Seville Jan 1 31 22 cases

YELLOW FEVER.

Ecuador Buday Feb 13 1 death Duran Feb 14 present Guayaquil Jan. 1 31 22 deaths Jan 26-Feb 9 3 deaths Huigra Feb 8 1 case 1 death

CHOLERA.

India Bombay Jan 22 29 2 deaths Cochin Jan 14 22 2 deaths Madras Jan 19 25 2 deaths Rangoon Jan 12 19 6 deaths.

PLAGUE.

Brazil Rio de Janeiro Jan 13 20 9 cases 3 deaths
Chile Antofagasta Feb 2 8 cases 2 deaths Taltal Jan 31 epidemic.
Egypt Alexandria Feb 4 6 1 case 1 death Ismailia, Jan 28 29 2 cases, 1 death Suez, Feb 3 1 case 1 death Assiout Province Jan 29 Feb 6 3 cases 3 deaths
India Bombay Jan 22 29 5 deaths Rangoon Jan 12 19 18 deaths.
Japan Formosa, Dec 1 31 202 cases 184 deaths.
Mauritius Dec 6-20 44 cases 28 deaths
Peru Callao Jan 14 1 case Cataenos 8 cases 2 deaths Chicharo 16 cases 10 deaths Lima 3 cases 3 deaths Mollendo 2 cases, 1 death Pascasnayo and San Pedro 30 cases 10 deaths Paita 5 cases 3 deaths Trujillo 21 cases 12 deaths.
Turkey in Asia Djeddah Jan 11 20 17 cases 16 deaths.

Society Proceedings

COMING MEETINGS

Assn of American Med. Colleges Richmond Va March 18 1907
Medical Society of Missouri Valley Omaha Neb March 21 22 1907
American Association of Anatomists Madison Wis. March 27 29
Med Assn of District of Columbia Washington April 2.
Tennessee State Medical Assn Nashville April 9
Mississippi State Medical Association Gulfport April 10
South Carolina Medical Association Bennettsville April 10
Medical Assn of State of Alabama Mobile April 16
Florida Medical Association Tampa. April 17
Medical Association of Georgia Savannah April 17
Medical and Chir Faculty of Maryland Baltimore April 23 25

ST LOUIS MEDICAL SOCIETY OF MISSOURI

Regular Meeting, held Feb 16, 1907

DR JOHN GREEN, Jr, reported the first meeting of the ophthalmic section a success Of a total of twenty five members, twenty were present and there were eight contributions to the program

DR JESSE S MYER gave some interesting demonstrations of esophagoscopy on a patient having stricture of the esophagus He demonstrated three principal uses for the esophagoscope, viz diagnosis, removal of foreign bodies, and a most valuable aid in treatment of strictures He stated that the use of the esophagoscope was attended with no danger if the obturator be removed as soon as the point of the instrument passes the cricoid cartilage, and if the instrument be passed further under direct scrutiny of the operator

Medical Education at Home and Abroad.

The following papers were read America, by Dr John Young Brown, Paris, by Dr C G Chaddock, London, by Dr Llewellyn Williamson, Berlin, by Dr A E Meisenbach, Other German Universities, by Dr W C Gavler, Vienna, by Dr Louis Rassieur

DISCUSSION

DR A RAVOLD said that America has a great deal to offer in facilities for medical education After a student has finished the prescribed medical course and has spent one or two years in a hospital or with some good clinician, he is ready to look about to learn a specialty America has splendid laboratories and just as great masters in charge as will be found anywhere They will take the student as far as they can and push him off into original research We have the best surgeons the world has produced The question is, with all these advantages, should one go abroad? It takes a tremendous time to learn a new language He had a slight knowledge of German, but when he arrived in Germany it all evaporated. For the first five weeks he had difficulty in making his wants known For the first three months, although studying German six and seven hours per day, he was unable to catch the drift of the lectures at all During the next three months he was able to catch sentences from the lectures At the end of a year he could catch the import of most that was said and felt elated over his achievement After eighteen months he could understand all that was said, translate it mentally, and take notes in English, still unable to think in German He said he did not believe himself duller than the average student, but that he wanted to tell the truth about medical education abroad. He believes, however, that it pays to study abroad for the great cultural advantages and for the reason that it broadens our views and makes us capable of seeing good in the accomplishments of men in any part of the world

DR. K W MILLICAN said in regard to the statement of Dr Williamson concerning the poor boarding houses in London for medical students that one should never seek a boarding house in London, but should secure lodgings and take meals out He said that two nicely furnished rooms could be had in a desirable part of the city for thirty shillings a week, including service such as he had never seen in this country

DR J M BALL said the reason that European countries had been in the ascendency in medicine up to the present time is because of their centralized form of government In this country it seems impossible to have proper national control of medical matters because of the question of states rights

CHICAGO MEDICAL AND CHICAGO PEDIATRIC SOCIETIES

Joint Meeting, held Feb 27, 1907

DR. J W VANDERSLICE President of the latter, in the Chair

SYMPOSIUM ON SCARLET FEVER.

Etiology and Pathology of Scarlet Fever

DR. LUDVIG HEKTOEN'S remarks are included in a paper which will appear in THE JOURNAL next month

Prophylaxis of Scarlet Fever

DR. HEMAN SPALDING said that scarlet fever is not so generally infectious as measles or smallpox In a community of susceptibles—those never having had the disease—about 38 per cent will contract the disease when exposed to it, whereas in a like community about 90 per cent will contract smallpox or measles if exposed to those diseases Only 7 per cent of those who have never had the disease above 40 years of age, are attacked when exposed to scarlet fever, and infants under four months of age were rarely attacked

The proof is strong that the infection can be conveyed through the milk supply Fruit and vegetables peddled from a house where scarlet fever exists can be the means of spreading the disease The infection has been conveyed through the mails in letters sent from an infected house

The prophylaxis consists in separating the sick from the well and destroying all infection emanating from the scarlet fever patient No articles of furniture such as carpets, rugs curtains ornaments, books, etc, except the things actually needed for the care and comfort of the patient, should be left in the sick room The floor of the sick room should be gone over with a mop or cloth wrung out of a disinfectant All dishes and table utensils used in the sick room should be placed in a disinfecting fluid before being taken from the room All discharges from the mouth and nose in scarlet fever should be received on pieces of old soft cotton, linen or worn handkerchiefs, and burned at once Complete isolation should be enforced until all desquamation of the skin is completed and there is entire absence of discharge from the ears, nose throat suppurating glands or inflammation of the kidneys The time required for scaling will vary from four to eight weeks A too early termination in cases of scarlet fever and careless and faulty isolation of patients are the most serious problems in the management of this disease in a large city All cases not properly isolated at home should be taken to a hospital He laid great stress on the point that after scarlet fever the entire house should be disinfected

Clinical History and Diagnosis of Scarlet Fever

DR. JOHN M DODSON presented a summary of the course and symptoms of scarlatina as presented in 300 cases treated at the Memorial Institute for Infectious Diseases He described the course of the usual type of moderate severity and then noted the distinctive features of the more severe forms of the disease All types of scarlatina are characterized by abruptness of onset and the brevity of the prodromes

The diagnosis of scarlatina, when typical, is seldom attended with doubt The sharp onset with vomiting, angina rapid rise of temperature and pulse and the prompt appearance of the eruption on the palate and skin, with the striking injection of the fauces and the peculiar tongue combine to form a picture little likely to be confused with any other disease

Atypical Cases of Scarlet Fever

DR M P HATFIELD said that any variation from a typical case of the disease would constitute, in his judgment, an atypical case He is distrustful of vomiting as pathognomonic symptom of scarlet fever Fever rises very suddenly going up almost simultaneously with the vomiting the backache, the headache or sore throat of which the child complains He knows of cases of scarlet fever that have come on insidiously with slight malaise slight indisposition on the part of the child, without any notable elevation of temperature These cases would run a doubtful course and yet be followed by a nephritis of the most discouraging character One should

not rely on the thermometer too implicitly in making a diagnosis of scarlet fever. He places a great deal of reliance on a characteristic angina. As to erythema, there are more variations in this than any single symptom found in the course of the disease. As to desquamation, he saw a case in which there was a sloughing off of the cast of the whole upper lip. In one case the eruption did not extend above Poupart's ligament. This patient made a satisfactory recovery without any drawback. Scarlatina fulminans kills patients by the intensity of the toxins before the physician is able to make a diagnosis. He reported one such case.

Treatment of Scarlet Fever

DR. ALFRED C. COTTON said the main indications are to support the patient and to aid in the elimination of the toxins. Thus far sera have been disappointing. His results from the use of Marmorek's antistreptococcic serum have not been satisfactory. The treatment of the intoxications, attended with high temperature, should be inaugurated by free catharsis. He believes in the value of mercurials as eliminants. Where the temperature is 104 or 105 degrees persistently, with symptoms of profound intoxication, he has seen beneficial results from *cold baths*. Where there is *delirium and restlessness*, quiet is restored and sleep induced by the cold bath, the cold pack or a tepid sponge bath.

DISCUSSION

DR. H. MANNING FISH spoke of coryza following scarlatina. Nasal catarrh of itself is not dangerous, but if allowed to persist, it may involve the sinuses or it may cause very serious complications of the eye or the brain, or by metastasis implicate other organs. A serious ocular complication following scarlatina is optic neuritis. In these cases treatment should be directed toward the sinuses rather than to the eye. Purulent empyema is the source of cerebral complications, owing to the intimate vascular supply between the cranium, the orbit and the sinuses.

DR. WILLIAM L. BAUM has looked for cases of Duke's disease during the recent epidemic, but has been unable to find a single instance which tallies with the description given by Duke. In the differential diagnosis of scarlet fever, measles, etc., at the Cook County Hospital they rely on examinations of the blood in all doubtful cases. In the mildest forms of scarlatina there is a decided leucocytosis, which is of great importance in the beginning of the disease. The epitrochlear glands are enlarged, and likewise the glands of the groin in about 80 per cent. of the cases. The minimum period of isolation should be six weeks, no matter how mild the attack. He deprecated the practice of those physicians who, to accommodate their patients, want to fumigate houses at the end of three weeks. School inspection, he said, should be a permanent feature.

DR. H. B. HEMENWAY of Evanston referred to the epidemic of scarlet fever in that city. He presented a statistical report of the cases, and gave unmistakable evidence that the epidemic could be traced to infected milk.

DR. H. W. CHENEY saw a series of scarlet fever treated last summer in Vienna with Moser's serum. *The action of this serum begins to manifest itself in from eight to twelve hours after injection.* A marked fall in temperature occurs, often the temperature drops to normal within twenty four hours, and continues there or nearly so. The pulse shows much the same change. The rash, when the injection is given, either does not develop or fades away more rapidly than usual. A marked betterment is noted in the general condition of the patient. The serum has been used in the Children's Hospital in Vienna since 1900. Before 1900 the mortality from scarlet fever at this hospital was 15 per cent., and since that time it has averaged less than 9 per cent. The mortality in other hospitals in Vienna where the serum has not been used during this period since 1900 has averaged 13 per cent. The serum has been given in over 200 cases, only the severest cases being so treated.

DR. O. TYDINGS said the serious complications attending or following cases of scarlet fever are largely due to diseased conditions of the nasal passages and throat. He believes that if the nose and throat are kept in a healthy condition there will be no sinus or middle ear complications.

DR. H. G. VAUGHAN believes that epidemics of this disease can be traced to infected milk. There have been approximately 110 cases of the disease in Oak Park, and although some suspicion arose as to the epidemic being due to infected milk, this suspicion has not been verified after a most careful examination of the sources of supply.

DR. A. H. BURR believes the epidemic in Rogers Park was due to infected milk supplied by one company.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

SECTION ON GENERAL MEDICINE

Regular Meeting, held Jan. 14, 1907

DR. WILLIAM E. HUGHES in the Chair

Chronic Intestinal Autointoxication.

DR. F. FORCHHEIMER, Cincinnati, said that intestinal autointoxication might be defined as that condition in which toxins formed in the intestines are absorbed by the organism in which they are produced. The use of this term, he said, had been objected to and that of enterotoxismos or intestinal toxemia substituted. Strictly speaking, only that process should be called autointoxication, which is caused by the toxic bodies resulting from metabolism and not due to any exogenous cause such as bacterial activity. Attention was called to an analysis of 77 cases examined by the ordinary clinical methods in which intestinal autointoxication was believed to be present.

Children were excluded because the clinical picture in them differs very much from that in the adult. In concluding the paper Dr. Forchheimer said that if the endeavor were made to get a composite picture in order that the diagnosis of chronic interstitial autointoxication might be made the following would have to be taken into consideration:

1. In the gastro-intestinal tract there are Riggs' disease, various forms of stomach troubles, change in functional activity of the colon and demonstrable retention of feces due to one cause or another.
2. In a large percentage of the cases indican is increased in the urine and *a microscope shows in a large percentage of cases calcium oxalate* (50 per cent.) uric acid and urates (25 per cent.) red corpuscles (about 30 per cent.) in 28 cases about 33 1/3 per cent. the alternation of polyuria with oliguria was noted.
3. Half of the female patients had menstrual trouble.
4. Next to Riggs disease nervous symptoms were present in the largest number of patients. Of these 77 patients 31 had headaches.
5. In a large number (58 out of 77) cardio-vascular changes were observed; over one-half were due to neuroses and to myocardial conditions.
6. Of the 77 patients 50 had locomotor symptoms, gouty joints but especially muscular symptoms.
7. Twenty two patients had skin lesions.

From the combination made by various symptoms, the diagnosis of chronic intestinal autointoxication should be easily made, and, as a matter of fact, this is the case in practice, as is shown when this diagnosis is followed by the logical therapeutic measure.

The great difficulty was pointed out of determining the importance of the intoxication in an individual case, whether it produces all the symptoms, whether it is the cause or the result of other conditions, whether it is the product or the predisposing cause. The greatest caution should be taken before chronic intestinal autointoxication should be looked on as the final diagnosis. In the selected cases this diagnosis was made only ten times. In all the other cases the autointoxication was looked on simply as a contributory cause, present and requiring treatment, but not the principal disease.

DISCUSSION

DR. HOBART A. HARE said that in a large percentage of cases of autointoxication the effects of the toxic materials are exercised on the nervous system, on the muscles and joints, thus producing widely varying symptoms. Certain articles of food produce toxicity, and a case was related in which eggs, some time after being eaten, caused this effect. In some instances the chewing of a rubber band or chewing gum with the expectoration of the saliva aids in the elimination of the toxicity. One class of cases cited was that presenting a particular type of dull con

stant headache for days or weeks, unrelieved by the ordinary methods nearly always associated with the presence of excessive phosphates in the urine, the urine being alkaline An other class of cases is unaccompanied by pain, but associated with profound melancholia and depression

An important point, in Dr Hare's opinion, is that of the activity of the kidneys in regard to the elimination of poison He emphasized the need of renal purges instead of simply purges by the bowel The necessity was pointed out of studying the condition of the bowels in relation to enteroptosis, believing that most of the poisons absorbed under these circumstances are from the intestine and not from the stomach, and that good results can not be secured until the enteroptosis is corrected The two types of autointoxication were referred to (1), that due to intestinal absorption, (2), that due to faulty metabolism These are frequently confused and should be separated. The intestinal cases can be relieved to some extent by renal and intestinal purges and some drugs, while the second is not usually benefited to any great extent by these methods

DR DAVID L EDSALL said that he believes that from the examination of the urine alone the conclusion is not warranted as to whether abnormalities in the urine are the consequences of changes in the intestinal tract or the result of abnormalities in the liver, excretory or various other organs in metabolism

DR. JOSEPH SAILER said that the subject of gastrointestinal autointoxication has been to him a very hazy one The chief difficulty in its study is that the work has been based largely on certain symptoms which are by no means pathognomonic of the condition. He attaches much importance to the study of the activity of the ferments in the gastric juice and believes that there are unquestionably a great variety of conditions, both natural and artificial, which have the capacity of inhibiting ferment activity in the stomach, and also a great variety of artificial conditions which have the capacity of limiting the ferment activity in the intestines Various cases of migraine, he said, can be brought on by certain food, and relieved as soon as the diet is corrected. An interesting group is that in which the symptoms are referable to the peripheral nerves, only relieved by lavage of the stomach, purgation, and other treatment applied usually to the gastrointestinal tract.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and methods of treatment for the diseases seen especially in every-day practice. Contributions will be welcomed from our readers.]

Angina Pectoris

Barner, in the London *Practitioner* states that in a severe attack of angina pectoris amyl nitrite should be inhaled at once, a capsule, containing 3 or 5 minims should be broken in a handkerchief and the vapor inhaled. If this fails to give relief in a minute or two chloroform may be tried, this is best administered on a sponge, in a small tin box, by the patient himself For persistent pain morphin gr. ¼ hypodermatically is required, and in a few cases patient may be benefited by the injection of liquor strychninæ hydrochloratis (B. P.) min. iii (0.2) At the same time a stimulating ammonia should be administered

℞ Spiritus ætheris
Spiritus ammoniæ aromatici ... ana ʒss
Aquæ camphoræ

M. Sig. Give at one dose.

Bromin gtt. 15(1.), may be given instead of the above. It is an excellent remedy for some cases of angina pectoris. Nitroglycerin (TV S. P.) or trinitrin, tabloids 1/100 (TV S. P.), may be taken. Some patients get relief when other drugs fail.

Take one of these ... Sig. One to four ... as ... necessary ...

In mild cases, or for pain persisting after the attack is much alleviated, hot applications to the precordium are often comforting When the attack has subsided the patient should rest, avoid all exciting causes and confine himself to a very light diet for the remainder of that day, a milk diet with arrowroot is the best Alcohol should be avoided

When these attacks recur a course of nitrites is often very beneficial The following combination is of service

℞	Spiritus glycerylis nitratis	m i	06
	Tincturæ cardamomi compositi	m xxx	2
	Spiritus chloroformi	m x	60
	Aquæ, q. s. ad	fʒi	30

M Sig Take at one dose if needed every three to four hours

Professor Osler recommends increasing the dose gradually every five or six days till headache and flushing are produced The nitrites may be taken for several weeks Perhaps the most difficult cases are those in which there is a tendency toward failure of compensation of the heart, as the spiritus glycerylis nitratis may increase this and the administration of digitalis may bring a return of pain Patients must be kept in bed while this preparation is being given Caffein and nux vomica may be more useful than digitalis in these cases

℞	Spiritus glycerylis nitratis	m i	06
	Caffeinæ citratis	gr. ii	12
	Tincturæ nucis vomicæ	m viii	50
	Syrupi aurantii	fʒss	2
	Aquæ, q. s. ad	fʒi	30

M. Ft. solutio Sig Take one such dose three times daily

The diet should be of a light farinaceous character Soft boiled eggs and fish may be allowed, but in severe cases peptonized milk, or milk and barley water only, should be taken for a short time

AVOIDANCE OF ATTACKS

The most important point for the patient who is liable to *angina pectoris* is the *regulation of his life in such a way* that he may avoid all forms of exciting cause The exciting causes are very variable probably the most common are physical exertion and distension of the stomach, and perhaps emotion. Hurrying for a train, walking fast uphill all forms of exertion, especially after ingestion of food, must be avoided Mental excitement, business worry, anger, or emotion of any kind, may set up an attack Exposure to cold bathing, substances that have a toxic action on the heart as tea tobacco, coffee and alcohol are all exciting causes which must be guarded against. An even quiet life free from excitement with plenty of fresh air and very gentle exercise is what is needed, warm clothes in the winter, and for the proper action of the skin warm baths are required

The diet should consist of milk boiled fish soft boiled eggs and milk puddings. A great many different foods may be allowed, and it is best varied. Plenty of water or some mineral water, should be taken. Vegetables and other articles likely to cause flatulence must be avoided

The bowels should be kept regular and free. The following must be kept in a state of [illegible] and [illegible] should be taken [illegible] may at times be beneficial

℞	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible] (P. P.)	[illegible]
	[illegible]	[illegible]

M. Sig. [illegible]

℞	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	[illegible]

M. Sig. [illegible]

carefully watched. Arsenic and strychnin combined give benefit in some cases.

℞ Liq. strychninæ hydrochloridi (B. P.)
Liq. arsenici hydrochlorici (B. P.), āā m iii | 18
Tincturæ aurantii amari m xx | 1 | 20
Aquæ, q. s. ad f℥i 30

M. Sig. Take one such dose three times daily after meals.

In neurotic cases potassium bromid is very beneficial and may be added to the alkaline digestive tonic prescribed above. When both anemia and valvular disease of the heart are present, digitalis and iron may be combined.

℞ Tincturæ digitalis m x | 60
Liquoris ferri chloridi m. xv | 1
Acidi citrici gr. v | 30
Syrupi limonis (B. P.) m xxx | 2
Aquæ dest., q. s. ad f℥i 30

M. Sig. Take one such dose three times daily after meals.

Digitalis must be given very cautiously, as it may bring on the pain. In cases in which there have been premonitory symptoms, the application of the galvanic electric current over the vagus in the neck has effectually warded off the attack.

The great essentials, then, in the treatment of angina pectoris are a quiet life, a wise diet, and the administration of nitrites in an attack. A patient subject to angina pectoris should carry amyl nitrite capsules or the tablets of nitro-glycerin, gr. 1/100. U. S. P.

Gibson, in the London *Practitioner*, states that ethyl iodid, otherwise known as hydriodic ether, is also of value in this condition given by inhalation in doses of 5 minims. The drug may be put up in glass capsules. The action is probably due to the liberation of free iodin. It is impossible to foretell whether the nitrites or the iodid series in a given case will give the most benefit. A very serviceable combination is supplied in capsules of ethyl iodid and chloroform, each capsule containing 5 and 10 minims respectively of the two drugs. In Gibson's experience the chloroform has lessened the discomfort produced by the hydriodic ether.

(This subject will be continued.)

Pruritus Ani

Cowles, in the *New York Medical Journal*, recommends the following:

℞ Unguenti hydrargyri ammoniati gr. xxv | 1 | 60
Adipis benzoinati ʒi 30

M. Sig. Apply locally as directed. Or

℞ Hydrargyri chloridi mitis ʒii 8

Sig. Use locally as a dusting powder as directed.

If there is much thickening of the skin surrounding the anus some preparation of salicylic acid should be used, for example:

℞ Acidi carbolici gr. xv | 1
Acidi salicylici gr. x | 60
Ichthyoli m xxiv | 1 | 60
Petrolati ʒi 30

M. Sig. Apply locally as directed.

A hot sitz bath or the application of hot compresses often confers immediate relief. The following formula is recommended by Morris:

℞ Acidi carbolici gr. xx | 1 | 20
Cocainæ hydrochloratis gr. x | 60
Petrolati ʒi 30

M. Ft. unguentum. Sig. Apply locally as directed.

Caution should be taken not to induce the cocain habit.

Leucorrhea

Hammond, in the *Therapeutic Gazette*, recommends the following to be used in the local treatment of this condition. *Douches.*—These should be bland, consisting of plain hot water or normal salt solution, or they may be astringent. From two to four quarts of water should be used at a time once or twice a day, the douche should be given in the reclining position.

℞ Acidi carbolici ʒiv 120

Sig. Eight to ten teaspoonfuls to four quarts of hot water and use as vaginal douche. Or

℞ Pulveris aluminis ʒx 300

M. et ft. chart No. x. Sig. Dissolve one powder in four quarts of water and use as vaginal douche. Or

℞ Plumbi acetatis ʒi 4
Aquæ dest. f℥iv 120

M. Sig. From two to five teaspoonfuls to each quart of water to be used as vaginal douche. Or

℞ Hydrargyri chloridi corrosivi ʒvi 24
Aquæ dest. f℥vi 180

M. Sig. One teaspoonful to four quarts of hot water to be used as a vaginal douche. (This makes a solution of 1 to 4,000.) Or

℞ Zinci sulphatis ʒxx 80

M. et ft. chart No. xx. Sig. Dissolve one powder to each quart of hot water and use as a vaginal douche.

Burtenshaw recommends the following combination:

℞ Pulveris aluminis
Zinci sulphatis
Acidi carbolici
Sodii biboratis, āā ʒi 30
Aquæ dest. q. s. ad ʒvi 180

M. Sig. Four tablespoonfuls to four quarts of water to be used as a vaginal douche.

Soft Corns

The *Druggists' Circular* February 1907, gives the following formula for the treatment of soft corns:

Acidi salicylici
Menthol, āā ʒi 4
Olei theobromatis ʒiv 120

No directions are given but this preparation may be applied every night after soaking the feet in warm water.

Inaccurate Prescription Writing

In replying to a correspondent who asks "What is liquor strychninæ?" the *Druggists' Circular* calls attention to the fact that many physicians write prescriptions which leave room for guesswork on the part of the pharmacist. In regard to the article in question it is stated that if the prescription was written by a British physician he probably had in mind the liquor strychninæ hydrochloridi of the British Pharmacopeia, the formula for which is:

Strychninæ hydrochloridi gr. xviiss | 1 | 13
Alcoholis (90 per cent.) f℥i 30
Aquæ dest., q. s. f℥iv 120

If an American physician wrote the prescription it is probable that he meant the liquor strychninæ acetatis of the National Formulary, the formula for which is:

Strychninæ acetatis gr. iii | 21
Acidi acetici dil. m xlviii | 3 | 5
Alcoholis f℥vi 25
Tincturæ cardamomi comp. m xv | 1
Aquæ, q. s. ℥iii 100

The strength of the British preparation is one grain of strychnin hydrochlorid to 110 minims, while the strength of the National Formulary preparation is approximately one grain of strychnin acetate to the ounce.

Medicolegal

Must State Way One Holds Himself Out as Physician

The Supreme Court of Vermont says, in the case of State *v.* Wilson that it has been decided by some courts, under statutes prohibiting the practice of medicine without a license, and which enumerated various acts which should be regarded as "practicing medicine," that an indictment charging the offense must allege some one of the acts so enumerated. In this case the material allegation in the indictment, apparently following the language of the statute, was that the respondent "did hold himself out to the public as a physician in this state, without having passed the examination required by law and without having received a license from the medical registration to practice as a physician." But it is held that this was not sufficient. The court says that there are various ways in which the respondent might have held himself out to the public as a physician and he was entitled to know in what manner the state claimed he "held himself out" before he was compelled to plead. As the rule is sometimes stated the allegation must descend far enough into particulars, and be certain enough in its frame of words to give the respondent reasonable notice of what will be produced against him at the trial. The court thinks that the alle-

gation in this indictment did not fulfill the respondent's right under the constitution "to demand the cause and nature of his accusation"

City and County Both Liable for Smallpox Expenses

The Court of Appeals of Kentucky says, in the case of Pulaski County vs City of Somerset, that in the year 1900 an epidemic of smallpox existed in said county, within and without said city Both the county and city had a board of health appointed as required by statute There arose a conflict of opinion between those residing within the city and without as to whether the county or city should bear the expense of treating and guarding the persons afflicted At a meeting of the members of the fiscal court of the county and the members of the city council, together with the members of both boards of health, it was agreed between all parties that the county and city, through their proper boards, should jointly provide means and care for all persons afflicted with contagious diseases, and to provide guards so as to prevent the spread of the disease Later it appeared that the city concluded that the county was responsible for the whole of the expense incurred. But the court holds that, under the statute with reference to the question involved, there was no doubt that both the city and county were responsible for the expense, the city for that incurred in treating those afflicted within the city limits, and the county for that in treating those so afflicted without the city

Different Community Requirements Recognized

The Supreme Court of Wisconsin says, in the case of State vs Evans, that it is not only desirable that drugs be dispensed to the public by skilful and competent persons to avert peril from occasional mistakes, but it is far more desirable, nay, practically essential, that medicines be within prompt and easy reach by the public The danger to life or health to be expected from occasional error of an incompetent salesman is hardly comparable to the injuries likely to result from exclusion of whole communities from opportunity to obtain the ordinary remedies often essential momentarily to save lives It is therefore, within the field of legislative discretion to provide only such restrictions as to competence of the dispenser as will not unduly prevent dealing in medicines The court is fully persuaded that legislators, within the bounds of reason might have believed that this result could be obtained in the large communities consistently with requiring the competence, age and experience prescribed for registered pharmacists, but that, in very small or sparse villages and towns, in many cases, the profits would not be sufficient to attract such men, and such communities might be left unprovided, that thus the very force of nature and human nature had created a class distinguished in respects directly relevant to the subject of protection of life and health by regulating the dispensing of medicines, and therefore proper of recognition and differentiation in framing laws on the subject If a given restriction which tends to protect lives and health in one class of communities will menace them in another the very imposition of it generally and without exception might be most obvious and oppressive discrimination

Physical Conditions to which Spouse Could Testify

The Supreme Court of Utah says that in the personal injury case of Davis vs Oregon Short Line Railroad Company the plaintiff's wife testified that prior to the accident her husband's health was good Then, over the objection of the defendant's counsel, she was permitted to answer the question "whether he was affected with pains in his back and side,' prior to the accident, also, whether his condition was different from one time to another, and what the facts had been and were at the time immediately after the injury with reference to his being lame The court holds there was no error in this It says that the witness was the plaintiff's wife and had lived with him for many years was in attendance on him during his illness, and was in a position to observe and to inform herself of his general physical condition as it was both before and subsequent to the time he was injured The rule is well settled that a non expert witness having been in constant attendance on a person and having had the opportunities for observing the movements and general physical condition of such person, as the record showed were afforded Mrs Davis in this case, is competent to testify whether the person is in good or poor health, and whether such person is afflicted with pains, or is free from pain

Likewise, the Court of Civil Appeals of Texas holds on the appeal of the St Louis Southwestern Railway Company of Texas vs Lowe, that questions asking a husband whether his wife had ever had any cough, lung or female trouble prior to a certain exposure to cold at the railway company's depot were not subject to the objection that they called for the opinion of the witness Whether his wife had ever had a cough lung or female trouble prior to such exposures were questions of fact, about which he was competent to testify and his testimony in relation thereto was the statement of a fact not merely the expressions of an opinion

Period of Gestation—Cross Examination from Books.

The Supreme Court of Iowa holds in the case of State vs Blackburn a prosecution for rape that objections to the testimony of physicians called as witnesses for the state as to the usual time of the gestation, it appearing that the prosecuting witness had given birth to a child 299 days after the alleged connection with the defendant, were not well taken, as the testimony of the witnesses tended to show that the period of gestation might extend beyond that length of time. It says that while the paternity of the child was not a fact necessary for the state to establish in order to make out the crime, the birth of a child within a possible period of gestation after the alleged connection would tend to corroborate the testimony of the prosecutrix as to the fact of such connection

The court also holds that there was no error in the prosecution being allowed, on cross-examination of physicians testifying as experts for the defendant with reference to the period of gestation, to refer to statements found in medical text books on the subject which the witnesses stated were standard authorities, and to ask the witnesses whether they agreed with the statements found in such text books This line of examination was objected to on the theory that the prosecution was thus allowed to put in evidence the statements found in such text books This court has held that medical books can not be introduced as independent evidence And in State vs Thompson 127 Iowa, 440, it is said that it is not proper to get the statements of such books into the record as independent evidence by asking a witness whether certain books do not contain statements quoted by counsel from them But in these cases the objection is to the statements in the books as independent evidence There is nothing to indicate that the usual practice of cross examining a medical witness by calling his attention to statements in books admitted by him to be standard is improper

Sufficient Evidence of Abortional Advertising

The Supreme Judicial Court of Massachusetts in the case of Commonwealth vs Hartford overrules exceptions to a conviction on an indictment under the statute of that state charging the defendant with knowingly distributing a circular or advertisement giving notice of a place where illegal operations might be performed on pregnant women It says among other things that, while the acts made criminally punishable are distinct from the crime of procuring an abortion evidence describing the rooms with their furnishings the envelopes addressed to physicians containing similar cards and her statements relating to the origin of her acquaintance with the officer to whom she had given the card described in the indictment, was properly admitted not only as being descriptive either of the defendant's place of business or of her employment but also as indicative of her guilty knowledge of its contents It is true that mere possession of this card was not a crime for the offense charged was its distribution or circulation as a paper conveying information [illegible] operations were performed for the [illegible] miscarriage of pregnant women [illegible] actually patient who was seeking [illegible] the

have been complete, and this equally would be true if the receiver was inquiring as to similar aid in behalf of a proposed patient The weight of the defendant's argument, therefore, was that because it was procured by false representations there was no proof either of distribution or of circulation Generally solicitation to commit a crime to which the party solicited yields does not exonerate the wrongdoer, or exempt him from prosecution, and under the statute it is the circulation or distribution with guilty knowledge which is made unlawful, although patients may not be obtained The intention with which it is put out is the controlling element, and if the defendant issued the card as an advertisement containing the information sought this would be a violation of the statute If from a desire to obtain patronage she chose to rely on the officer's statements rather than to require any corroboration before acting on them such conduct would neither lessen her criminal responsibility, nor render his testimony incompetent if the jury were satisfied that it was delivered voluntarily with a criminal purpose, which was clearly and accurately explained in the instructions given

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Boston Medical and Surgical Journal.

February 28

1 *Study of Hydronephrosis. A T Cabot, Boston
2 *Surgical Treatment of Tuberculosis of the Kidney F S Watson Boston
3 *Tuberculosis of the Kidney P Thorndike, Boston
4 *Experimental Studies in Arteriosclerosis. O Klotz Montreal Canada
5 Visceral Arteriosclerosis H Brooks New York
6 Innervation of the Uterus. W L. Burrage

1 **Hydronephrosis.**—A number of cases are reported by Cabot for the purpose of calling attention to the confusion which still exists as to the relations of false and true hydronephrosis In true hydronephrosis the sac which contains the fluid is the distended pelvis of the kidney, while in false hydronephrosis the fluid is contained in a sac outside the kidney One case is reported in which both conditions coexisted in connection with one kidney This was properly a case of congenital hydronephrosis, although the dilatation of the kidney was not noticed until some years after birth A congenital obstruction of the ureter, by looping over a vessel, was responsible for the condition In another case cited the obstruction seemed to be a valvular one at the junction of the ureter with the renal pelvis In this case a nephrotomy was done as a preliminary to a nephrectomy with excellent results

2 **Surgical Treatment of Tuberculosis of Kidney**—Watson's beliefs in regard to the surgical treatment of tuberculosis of the kidney are in accord with those entertained by other writers on this subject

3 **Tuberculosis of Kidney**—Thorndike believes that in the comparatively small but constantly increasing number of patients in whom the diagnosis can be made before much destruction of kidney tissue or involvement of other organs has taken place, hygiene and climate should have a chance before the kidney is removed He believes that this treatment will often do away with the necessity for an operation For the more numerous later cases nephrectomy is always the operation of choice, and should be done in every instance, if the patient can stand it and if he has another kidney capable of doing a fair amount of work, whether the disease has passed beyond the limits of the organ to be removed or not, and whether the other kidney be involved or not

4—See abstract in THE JOURNAL, Jan. 19, 1907, page 266

St Louis Medical Review

February 23

7 *Extraordinary Anatomic Curiosity H J Scherck St. Louis.
8 Gallstones N F Baker Fulton Mo
9 *Diagnosis of Gallstones.* R Hill St. Louis

7 **An Anatomic Curiosity**—In the case reported by Scherck the thumbs presented the appearance of a long forefinger, and the Roentgen ray showed that there was an extra phalanx in each thumb There was perfect control of the last phalanx and the joint could be bent without trouble The thumbs were long and tapering, and the nail of each thumb was set more on the dorsal aspect of the digit than is usual in normal cases

New York Medical Journal.

March 2

10 *Trypsin in Cancer W S Bainbridge, New York
11 New High Frequency Devices. H G Piffard New York
12 *New Bed Frame also an Apparatus for Application of Body Casts C M Fauntleroy Philadelphia.
13 *Study of Shreds in Urine in Their Relation to Diagnosis and Prognosis D Saxe New York
14 Accessory Sinuses of the Nose from the Rhinologic Standpoint. C W Richardson Washington D C.
15 Accessory Sinuses of the Nose from an Ophthalmologic Standpoint. W C Posey Philadelphia
16 *Acid Intoxication C. G L. Wolf New York
17 *Appendicitis B S Talmey, New York.

10 **Trypsin in Cancer**—Bainbridge has employed trypsin in a few cases with unsatisfactory results He cautions against the formation of premature conclusions in any case in which the trypsin treatment is employed and refers in particular to one case which had been under his care and which had been reported by others as a cure He says that the observations made thus far are too incomplete to warrant making any definite statements as to the value of this treatment. It should be tested scientifically, and while it is being so tested all judgment as to its efficacy should be suspended

12 **New Bed Frame**—The frame described by Fauntleroy is made from three eights iron piping bent at right angles at each of the four corners and cut through the middle of the cross bars, which have on their inner surface, around the lumen of the pipe, a series of right and left hand threads to receive the corresponding threads on the screws at each end of the frame The threads extend into the cross bars for about three inches on each side of the cut ends Threads of the same length are on the end screws on each side of the taps, this enables the frame to be increased in width about six inches if desirable, by simply turning the end screws by means of a small wrench fitted to the tap The cover for the frame is made of heavy canvas, and is in two parts Each half is made in the form of a bag, one of which is a little longer than the other, these bags are closed on both sides and at one end by reinforced stitches, thus giving an amply strong cover that will safely withstand sufficient tension The bags are slipped on over the ends of the frame and are provided at the center of the closed end with a small opening, which leaves uncovered only the tap on the end screws, thus making it perfectly easy to apply the wrench, and by turning the tap to increase the width of the frame, thereby making the cover as tense as desirable As the frame is covered on both sides alike, it is only necessary to reverse it should it become soiled by food, etc, accidentally spilled or by the body excretions as may occur from incontinence due to pressure myelitis in bad cases of Pott's disease or from other causes The bed frame is made in different lengths to accommodate children ranging in years from 3 to 14

13 **Study of Shreds in Urine**—Saxe presents the results of a study of shreds in the urine in a large number of cases of urethritis and prostato vesiculitis The method of staining the shreds is as follows 1 Fix with alcohol and ether for ten minutes (or imbed in collodion, dry and soak in water for ten minutes) 2 *Stain for from one to two minutes in Unna's* polychrome methylene blue 3 Wash well in distilled water *Dry 4 Dehydrate for a few seconds in 95 per cent alcohol* Dry with filter paper 5 Clear in xylol or in clove thyme mixture Dry with filter paper 6 Mount in balsam Saxe found that the study of shreds is not of great value in the localization of the affection in the anterior or the posterior urethra, but that the presence of prostatic or vesicular shreds which can be recognized microscopically is an aid to the localization of the process The study of urethral shreds is valuable in determining the stage of the process In the prognosis *the variety of urethral shreds present is of limited usefulness* The fewer the shreds and the fewer the pus cells, the better the prognosis and vice versa

16 Acid Intoxication.—Wolf discusses the condition designated as acid intoxication or acidosis. He says that acidosis is not synonymous with acid intoxication. It is a distinct entity which he defines as being the production through a faulty metabolism, or otherwise, of acid products which may or may not produce intoxication. Wolf claims that on the surface the theory of acid intoxication is altogether plausible and has the advantage of fitting in with certain clinical data. When it is subjected to strict criteria, however, it fails to stand the test. It also has the very unfortunate property of leading one to diagnosticate as toxemias clinical conditions the urinary symptoms of which are entirely due to insufficient food intake. From this standpoint it is in the hands of many a positive clinical menace.

17 Appendicitis.—Talmey reports two cases of appendicitis with delayed operation in which abscesses were found in other parts of the abdomen. In the first case cited the appendix was found gangrenous and what was left of it was removed. Fourteen months later the patient again suffered with pain in the lower abdomen. This was found to be due to the presence of about half a pint of pus in Douglas' pouch. In the second case the abscess extended from the cecum to the vault of the diaphragm beneath the liver. The patient died two days after the abdomen was opened. Talmey also reports two cases to show the difficulties that sometimes attend the diagnosis of appendicitis.

Medical Record, New York.
March 2.

18 *Influenza in Its Relation to Diseases of the Nervous System. J. Collins, New York.
19 *Relation of the Tonsil to Infection and Infectious Diseases. R. C. Brown, Milwaukee.
20 A New Streptothrix Pathogenic for Cattle. C. F. Kieffer, Fort D. A. Russell, Wyoming.
21 *Preservation of Hearing. W. S. Bryant, New York.
22 *Case of Acute Edema of the Pharynx. G. Link, Indianapolis.
23 Case of Trichiniasis. J. M. Ferrer, New York.

18 Influenza in Relation to Nervous System.—Collins says that the baneful effects of the pathogenic activity of the Pfeiffer bacillus on the nervous system have been overestimated, and that in reality influenzal and postinfluenzal neurosis and psychoses are not very common. The bacillus of influenza may and does cause meningitis, encephalitis, myelitis and possibly neuritis. The toxins produced by the pathogenic activity of the influenza bacillus are adequate exciting causes of neurasthenia and psychasthenia, of neuritis and neuralgia, of various forms of insanity, of independent nervous systems, such as insomnia, vertigo, headache, and they may be contributory to the causation of any disease that afflicts the human being. Nevertheless, neither the bacillus of Pfeiffer nor its toxins he declares, is a common cause of nervous disease. The disorders of the nervous system that stand most frequently in causative relation to influenza are those dependent not on the direct action of the bacillus of influenza on the nervous system, but on the activity of toxins produced by the pathogenic activity of these germs. These are neurasthenia and psychasthenia, neuralgia and neuritis, and diseases and disorders of the nervous system *attending and dependent on* arteriosclerosis.

19 Relation of Tonsil to Infection.—Brown shows how admirably, from an anatomic standpoint, the tonsil is arranged to resist infection. Inflammation of the tonsil is caused by a pathogenic germ which is endeavoring to enter and the inflammation itself is a defensive reaction. When the resistance of the body is lowered or the germs are virulent enough to overcome the other means of defense, or if the tonsil is wounded a positive chemotaxis having been produced, there is a lacunar tonsillitis. When a negative chemotaxis is produced there is a general systemic infection without a tonsillitis. Finally, the relation of the tonsil to infection and infectious diseases is one of protection.

21 Preservation of the Hearing.—Bryant believes that early observation will detect insidious conditions which cause over 95 per cent. of deafness and that judicious treatment will cure these conditions before serious impairment of hearing has taken place. He suggests that the otologist should be consulted once a year, after every cold and wherever anything unfavorable is noticed in the ear.

22 Acute Edema of the Pharynx.—In the case reported by Link an acute edema of the pharynx and unconsciousness followed an attack of simple tonsillitis of ten days' duration. A speedy and successful tracheotomy was done.

Illinois Medical Journal, Springfield
February

24 *Treatment of Senile Gangrene. E. H. Ochsner, Chicago.
25 Pneumonia. R. H. Bradley, Marshall, Ill.
26 The Law as to Expert Testimony in Illinois. W. A. Evans, Chicago.
27 *Surgery of the Gall Bladder. M. W. Bacon, Chicago.
28 Renal Functional Tests and Diagnostic Methods of Nephrectomy, Nephrotomy, Nephropexy and Ureteral Surgery. I. S. Leusman, Chicago.
29 Diabetes Not a Disease *Per Se*. S. A. Oren, Lewistown.
30 Serious Surgical Emergencies. J. A. Day, Jacksonville.
31 *Congenital Stenosis of Pylorus. H. W. Cheney, Chicago.
32 *Prescribing. H. J. Achard, Elgin.

24.—See abstract in THE JOURNAL, Jan. 12, 1907, page 162.

27 Surgery of the Gall Bladder.—Bacon reports 14 cases of disease of the gall bladder to emphasize the value of conservatism and of drainage in the operative treatment. In a series of 100 cases the mortality was only 3 per cent. Among the cases reported are the following: Acute cholecystitis with a large stone in the cystic duct, 2 cases, calculi in the gall bladder with previous inflammatory attacks and adhesions, 2 cases, acute cholecystitis with thickened gall bladder from previous attacks of inflammation and obstruction of cystic duct by calculi, 2 cases, hydrops of gall bladder with obstruction of cystic duct by calculi, 2 cases, acute cholecystitis with thickened gall bladder and obstruction of cystic duct without calculi, 2 cases, empyema of gall bladder, with one stone 4½ inches long, 1 case, carcinoma of gall bladder (patient died ten days after an exploratory operation), 1 case, acute obstruction of common duct by calculi, 2 cases.

31 Stenosis of Pylorus.—Cheney reports a typical case of hypertrophic stenosis of the pylorus in which a successful operation was done. Symptoms first manifested themselves when the infant was four and one half weeks old. The baby vomited two or three times a day. A gastroenterostomy was done the morning of the eighth day after the appearance of the first symptom.

32 Prescribing.—The proprietary medicine question is discussed by Achard, who insists that physicians ought never to be asked to use or to prescribe any preparation unless they are fully and freely informed of its composition. The use of proprietary articles has often made physicians lose sight of the fact that they must prescribe for conditions rather than for names of diseases, that they must attend to the underlying causes and treat the symptoms as they arise. Achard says that prescribing is not copying ready furnished formulas but is an art which involves an intelligent comprehension of a symptom complex, and the knowledge of how to meet the requirements of the case. Achard speaks of the use of ready made preparations as lazy, unscientific and not quite honest. He suggests that it is better to master thoroughly and to use twenty remedies which admit of a greater variety of combinations than to know the names of a hundred compounds and to prescribe them according to directions on the label.

American Journal of Medical Sciences, New York.
February

33 *Symptomatology, Diagnosis and Surgical Treatment of Cervical Ribs. W. W. Keen, Philadelphia.
34 *Compulsory Vaccination, Antivaccination and Organized Vaccination. C. Dock, Ann Arbor, Mich.
35 *Clinical Manifestation and Treatment of Acute Cardiac Dilatation. B. Robinson, New York.
36 *Experimental Studies of Cardiac Murmurs. W. S. Thayer and W. C. MacCallum, Baltimore.
37 *Aneurism of Arch of Aorta, Rupture into the Superior Vena Cava. M. H. Fussell, Philadelphia.
38 *Different Forms of Albumin Occurring in the Urine. F. Hastings and R. P. Hobson, New York.
39 *Pathology and Treatment of Nephritis. I. W. Wessler, Chicago.
40 *Roentgen Rays in Unresolved Pneumonia. D. L. [illegible] and [illegible]
41 [illegible]

33 Cervical Ribs.—Keen reports the history of a patient on whom he operated and discusses all cases recorded in the literature in which an operation was done

34 Vaccination.—Dock believes that recent epidemics of smallpox show conclusively the need of more vaccination He says that what is needed is not statutory compulsion, but an organized and scientific procedure that shall have the confidence and support of a large majority of the people and that shall have no weak spots in any part The present methods make certain a high ratio of smallpox cases with an unduly low protection to the individual There is nothing, he asserts in the fundamental law of the land to prevent the passage of safe and efficient vaccination laws, which should aim at a widespread protection by vaccination and revaccination The operation itself should be a matter of permanent record, and a certificate from an authorized official should be proof of the vaccination of each individual The operators should be trained for their work, familiar with the vaccination laws, and bound to follow them Dock would control the manufacture of vaccine by competent experts He says that vaccination should be done at fixed times of the year when epidemic diseases are not most prevalent, in places appointed and equipped for the purpose, the individual should be examined after the operation at a time fixed by the regulations, or at once on suspicion of complication He would permit private vaccination only under special conditions with revision of the result by a competent health officer

35 Acute Cardiac Dilatation.—Three varieties of cardiac dilatation are considered by Robinson 1 The cardiac dilatation which shows itself during the course of some acute infectious disease 2 The cardiac dilatation of nervous origin, due primarily many times to the wear and tear of an anxious and working life but in which the strain falls far more directly on the brain and nervous system generally than on the muscular make up of the body 3 The rapid or sudden cardiac dilatation which comes to those whose excesses in eating or drinking or the use of tobacco are notable and long continued and who are unable to bear even temporary physical strain without experiencing painful threatening or alarming effects which become manifest very soon or immediately after the exertion

36 Cardiac Murmurs.—Having studied the character of the heart sounds of the normal dog, Thayer and MacCallum have produced, as far as possible, the lesions commonly observed in man each in several cases In other experiments they have made a few observations concerning the development of functional basic murmurs The authors suggest that when auscultation is taught in small sections, several exercises in the study of experimental cardiac murmurs in the dog would do more toward making clear in the mind of the student the essential facts, without which rational diagnosis of cardiac lesions is impossible, than any other method of instruction Aortic and pulmonic stenoses were produced by the passage of a cord about the vessel just above the valves Aortic insufficiency was produced in eight instances The nearest approach that was made to producing a mitral stenosis was to apply a clamp at about the position of the mitral ring In six cases mitral insufficiency was produced by tearing the valves of chordæ tendineæ with a knife hook.

37 Aneurism of Arch of Aorta.—Fussell reviews 36 recorded cases and adds one case of his own or aneurism of the arch of aorta which ruptured into the superior vena cava The diagnostic signs of this occurrence are said to be a sudden cyanosis edema and dilatation of the veins of the face head neck, arms and chest, a peculiar, continued high pitched murmur, present in about half the cases, and the physical signs of aneurism of the aorta

38 Forms of Albumin in Urine.—Out of 5,330 specimens examined by Hastings and Hoobler 4 068 showed reactions for albumin by heat and acid or by salting or heat and acid or by both Nucleoalbumin alone was found in 839 of the specimens The authors claim that albuminuria does not, necessarily nor does it usually indicate nephritis, but it may be indicative of nephritis and therefore can not be disregarded in diagnosis Albuminuria with casts is good evidence of nephritis, either temporary or permanent, in conditions showing the other evidences of Bright's disease In no instance did nucleoalbuminuria alone occur in a case which suggested in any way nephritis In only one instance was serum albumin absent in a case with the clinical diagnosis of nephritis The authors emphasize the frequency of non renal albuminuria and the occurrence of nucleoalbuminuria alone in a large percentage of cases They recommend the addition of saturated salt solution with subsequent heating and acidifying with acetic acid as the safest test for serum albumin

39 Nephritis.—Webster discusses the modern conceptions of nephritis, the influence of cardiovascular changes, albuminuria and cylindruria, chlorid retention, edema, uremia and the treatment of nephritis He says that it is important to recognize that each case is a law unto itself, and that routine treatment is not only irrational, but condemnatory He regards the limitation of salt as unnecessary because the theory on which its deprivation is based is not tenable He considers the surgical treatment of nephritis rational in some cases and successful in many

40 Roentgen Rays in Unresolved Pneumonia.—Edsall and Pemberton report the history of five patients who were treated with Roentgen rays for unresolved pneumonia with most excellent results The authors state first that no results can be expected unless the duration of the condition has been reasonably short—a few weeks at most—for if organization has occurred a satisfactory result of treatment is almost inconceivable Second the condition should be chiefly a real lack of resolution and not a continued inflammation of the lung Third, it is exceedingly important to determine, so far as possible, that one is actually dealing with unresolved pneumonia and not with tuberculosis The treatment should be begun tentatively and with brief exposures and small doses until it is determined in the individual case that serious results are not likely to ensue

41 Diphtheria Epidemic.—The epidemic of diphtheria reported on by Brown, Allen and Lupton lasted 51 days Eleven cases of diphtheria and in 32 other individuals diphtheria bacilli were found on culture There were no fatalities and no serious complications In all, over 400 immunizing doses of antitoxin were given to 129 tuberculous and 45 non tuberculous individuals In no case did any infection occur In four instances diphtheria developed between the fourteenth and sixteenth days following the first injection, and in one case four days and in another one day after the second injection The authors state that in the presence of diphtheria epidemic patients with pulmonary tuberculosis should be treated as regards the diphtheria like otherwise healthy individuals Mild diphtheria seems to exert little or no harmful influence on the pulmonary lesion in the tuberculous, and the antitoxin in small or large doses seems to have little or no effect on the pulmonary tuberculosis Immunizing doses may be given patients with fever Complications seem to occur after diphtheria no more often, probably less, in the tuberculous than in the non tuberculous

The Ophthalmic Record, Chicago
January

43 *Relief and Cure of Migraine by Correction of Errors of Refraction A. R Baker Cleveland
44 Stereoscopic Charts for Hyperphoria D W Wells Boston
45 Operation for Secondary Cataract Embedded in the Vitreus R. Denig New York
46 *Melanotic Flat Sarcoma of the Choroid with Unusual Clinical Symptoms G E de Schweinitz and C M Hosmer Philadelphia.
47 Cataract Lid Retractor and Fixation Forceps A E Prince Springfield
48 Cysticercus Cellulosæ of the Iris Operation with Perfect Recovery R Rembe Chicago
49 Sarcoma of the Choroid W G Gilbert, Calais, Me

43 Refraction Cure of Migraine.—Inquiry made of 100 patients suffering from migraine showed Baker that 55 were cured, that is, there was no return of migraine, after the error of refraction was corrected Thirty one patients were greatly benefited and seldom had attacks, and when they came the attacks could usually be accounted for by *leaving off the* spectacles, e[illegible] e eye work, worry, indiscretion in eating

and drinking, commencing presbyopia, etc Of the fourteen patients who were not benefited by correction of the error of refraction, five were cured by tenotomy of the ocular muscles, and one was cured by the use of the pessary Eight patients continued to suffer more or less severely from migraine, but all continued to wear glasses and said they could not do with out them Baker calls attention to the fact that it is possi ble for a person with emmetropic eyes to have migraine from eyestrain, consequently, a correction of an error of refraction may not entirely cure a patient of migraine if the patient continues to overwork.

46 Melanotic Flat Sarcoma of Choroid —The case reported by de Schweinitz and Hosmer is interesting from several standpoints It illustrates the value of transillumination as a diagnostic agent and because flat sarcomas of the choroid are comparatively rare Noteworthy features of the case were the recurring attacks of neuralgic pain, edema of the lid and localized edema of the bulbar conjunctiva with injection of the overlying superficial vessel The diagnosis was confirmed microscopically

Albany Medical Annals
February

50 What Shall We Eat? What Shall We Drink? How Shall We Be Saved? G S Dveleth Little Falls, N Y
51 *Importance of Intracellular Enzymes in Physiology and Path ology H C Jackson Albany N Y
52 *Extrauterine Pregnancy G S Towne Saratoga Springs N Y

51 Importance of Intracellular Enzymes.—Jackson presents a very complete review of the character, properties and mode of action of intracellular enzymes Incidentally, he remarks that it is decidedly questionable whether or not the beneficial results which are so often reported as the result of the so called enzyme treatment of carcinoma and other conditions are in the relation of cause and effect in connection with the enzyme He says that scientifically there does not seem to be any reasonable basis for the treatment.

52 Extrauterine Pregnancy —Towne reports two cases of extrauterine pregnancy The first case was rather a simple one of isthmic tubal pregnancy partially aborted, the second one was a ruptured tubal pregnancy, being almost a tubo uterine type Both cases show the necessity of immediate surgical intervention

The Laryngoscope, St Louis.
January

53 Practical Problems in Otology and Rhinology D Grant Lon don
54 *Relation of Pathologic Condition of Nose and Accessory Sinuses to Visual Apparatus J A. Stucky Lexington
55 Mixed Laryngeal Infection C F Munger Waterbury Conn
56 *Lymphosarcoma of Pharynx. O T Freer Chicago
57 Optic Neuritis in Thrombosis of Cranial Sinuses and Internal Jugular Vein H G Langworthy Dubuque Iowa.
58 *Operations on the Ear in Tuberculous Patients W G B Harland Philadelphia.
59 Points in the Anatomy of the Temporal Bone to be Considered in Connection with Mastoiditis. J Hollinger Chicago
60 Facial Hypoglossal Anastomosis J C Beck Chicago.
61 *Traumatic Laryngitis with Eversion of Laryngeal Ventricle J H Abraham New York
62 Speculum for Submucous Resection of the Septum H P Mosher Boston
63 Simple Strong Tonsil Snare H P Moseley New York

54 Relation of Nasal and Accessory Sinuses to Eye— Stucky claims that not enough attention is given to the treatment of the acute form of nasal accessory suppuration and that the importance of its early recognition is not fully appreciated He is convinced that many cases of paresis and paralysis of the extraocular muscles supposed to be due to rheumatism or to syphilis are caused by sphenoidal or eth moidal disease He has seen one case of ophthalmoplegia externa in which Killian's operation gave complete relief The symptoms of the eye disturbance vary as much as do the size shape and position of the sinuses Stucky urges a closer relationship between the oculist and the rhinologist

56 —See abstract in THE JOURNAL, Dec 22 1906 page 2123

58 Operations on Ear in Tuberculous Patients.—Harland finds that there are three operations that are occasionally called for in tuberculous patients with ear complications 1 Incision through the drum membrane, 2 removal of granula tions and establishment of free drainage from the middle ear in cases with purulent discharge, 3 mastoid operation

61 Traumatic Laryngitis.—Following a very severe pum meling one blow landing on the right side of the larynx, Abraham's patient complained of dysphagia, melena and epis taxis He could not talk above a whisper The mucosa of the larynx was inflamed and infiltrated Covering and com pletely obscuring the right vocal cord was an oval tumor, deeply injected, which was diagnosed as an eversion or pro lapse of the laryngeal ventricle Abraham applied ice com presses, put the patient to bed and administered sulphate of magnesia On the fourth day a 1 per cent solution of alum was sprayed into the larynx, later this was gradually in creased up to 5 per cent The patient recovered his voice and regained his usual health

St. Paul Medical Journal.
February

64 *Two Cases of Endothelial Sarcoma of the Brain Successful Removals with Subsequent Death C E. Riggs, St. Paul
65 Tent and Porch Living for Consumptive Patients R M Phelps Rochester Minn
66 *Submucous Resection of the Nasal Septum for Correction of Septal Irregularities W R. Murray Minneapolis.
67 Cytotoxins. L S B Robinson St. Paul Minn
68 Uterine Fibroids Complicating Pregnancy A MacLaren St Paul

64 Sarcoma of Brain —Riggs claims that in every case of brain tumor radical operation should be done if possible If this is not advisable, decompressive trephining should be done He regards cerebral decompression as a definite recognized means of surgical endeavor in every inoperable case He urges that palliative operations should always be done early and be fore optic atrophy has occurred Pain will kill, headache, therefore, may be of such intensity as to demand this pro cedure The first patient whose history is given by Riggs died about three months after the operation from what is called a complication of diseases There was no postmortem In the second case the growth evidently was of metastatic origin, the primary tumor being situated in the lung This patient died about six months after the operation, from which considerable benefit had been received

66 Submucous Resection —Murray refers briefly to all the operations that have been employed for the correction of irreg ularities of the nasal septum but expresses himself as favor ing submucous resection

American Practitioner and News, Louisville
February

69 Malaria. W F Blackford Louisville
70 Scalp and Skull Injuries J F Dunn Louisville

Journal of the Minnesota State Medical Association, Minne apolis
February 15

71 Symptoms and Diagnosis of Gallstones with Report of Cases C G Swenson Braham Minn
72 Mitral Lesions of Endocarditis G J Schottler Dexter Minn
73 The Tuberculosis Problem W H Aurand Minneapolis Minn
74 Retroversion of the Uterus D N Jones Gaylord Minn
March 1

75 Sidelights from Recent Literature on the Etiology and Pathol ogy of Pneumonia S M White Minneapolis
76 Complications of Pneumonia H H Witherstine Rochester
77 Symptoms Diagnosis Course and Prognosis of Pneumonia F H Bayley Lake City Minn
78 Superficial Lesions Caused by the Diplococcus Pneumoniæ L S Judd Rochester
79 Experiences in Obstetrics C T Granger and C T Joyce Rochester
80 Case of Tetany L C Weeks Detroit
81 Rocky Mountain Spotted Fever W Chowning Minneapolis
82 Case of Strangulated Hernia C H Hunter Minneapolis

Vermont Medical Monthly, Burlington
February 15

83 *Unusual and Abnormal Conditions of the Appendix A J Heinel Chicago
84 Perforative Appendicitis S A Russlow Randolph Vt
85 Treatment of Pneumonia J M French Milford Mass
86 Urinary Diagnosis in Nephritis C H Parmenter Montpelier
87 Therapeutics of Quinin J I Newton Benson

83 —This article appeared in the Mobile Medical and Sur gical Journal June, 1907

Detroit Medical Journal
February

88 Present Status of Surgery of Prostate J Thorndike Boston
89 Hyperemia as Treatment for Acute and Chronic Inflammatory Disease M Ballin Detroit.
90 Study of the Infant's Stool J [illegible]
91 Etiology and Treatment of [illegible] Detroit

Medical Sentinel, Portland
February

92 President's Address. Portland Academy of Medicine. S. E. Josephi, Portland, Ore.
93 Surgical Anatomy of the Mastoid Antrum. C. W. Shaff, Lewiston.
94 Value of Blood Examination in Surgery. R. I. Newell, Spokane.
95 Diarrhea in Infancy and Early Childhood. A. Hunter, Kendrick, Idaho.
96 Gelseminin. R. J. Smith, Smithfield, Utah.

Kentucky Medical Journal, Bowling Green.
March

97 *Tuberculosis of the Peritoneum. L. S. McMurtry, Louisville.
98 Protection of the Innocent from Venereal Infection and Prostitution. T. M. Stites, Hopkinsville.
99 *Gonorrhea, Up To Date. J. T. Windell, Louisville.
100 Asepsis. W. H. Taulbee, Maysville.
101 Relation Between the Railway Company and the Railway Surgeon. C. H. Vaught, Richmond.
102 Management of the Epileptic State. C. Pope, Louisville.
103 Hyperchlorhydria or Hyperacidity. G. E. Huddle, Bowling Green.
104 Medical Consultations. J. A. Lewis, Georgetown.
105 Observations of European Surgery. O. E. Bloch, Louisville.
106 Treatment of Hepatic Abscess by Aspiration and Siphonage. O. H. Reynolds, Frankfort.

97, 99—See abstract in THE JOURNAL, Oct. 29, 1906, page 1401.

Medical Fortnightly, St. Louis
February 25

107 Critical Analysis of the Expert Testimony in the Jack the Stabber Case. D. S. Booth, St. Louis.
108 Systematic Treatment of Syphilis. W. S. Gotthelf, New York.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.
February 16

1 *Objects of Hunter's Life. H. T. Butlin.
2 *Ichthyosis and Its Treatment. W. A. Jamieson.
3 *Treatment of Rodent Ulcer by Zinc Ions. L. Jones.
4 *Secondary Suture of the Great Sciatic Nerve. J. Sherren.
5 *Idiopathic Dilatation of the Rectum and Colon as Far as the Hepatic Flexure. H. M. Fletcher and H. B. Robinson.
6 *Parathyroids and Accessory Thyroids in Man. D. Forsyth.
7 Influence of Increased Barometric Pressure in Man. Saturation of Tissue Fluids with Nitrogen. M. Greenwood.

1 Objects of Hunter's Life.—Butlin gives a short sketch of the life of Hunter, taking up particularly the scheme of his life and the means he took to accomplish what he did.

2 Treatment of Ichthyosis.—Jamieson lays great stress on the importance of promoting exfoliation of the unduly adherent and effete horny cells in this affection. He recommends the use of resorcin combined with glycerin, in union with starch, which is said to form a bland, persistent, soothing and softening medium with which the resorcin may be combined. He advises using a medicated soap and a superfatted one with which resorcin and salicylic acid are incorporated because this prepares the way for the subsequent glycerinization. He has also found the internal administration of cod liver oil, in small doses at night, of some service.

3 Treatment of Rodent Ulcer.—The method described by Jones can be carried out with an ordinary portable battery. The process is based on the principle of the introduction of zinc ions into the tissues of the ulcer by means of a continuous current. The ulcer is made to assume the appearance of an ordinary simple sore, and in many instances it is healed in a few weeks after a single application. An ordinary medical continuous current battery, with a galvanometer, a pair of wires, a flat pad for completing the circuit at the negative pole, and a rod or other electrode of zinc attached to the positive pole completes the outfit. The zinc must be covered with three or four layers of lint, which serve as a reservoir to hold the zinc solution, a 2 per cent. solution of the sulphate being very suitable. The zinc should be freshly cleaned or amalgamated, and the solution should be made with distilled water. It is as well not to touch the zinc electrode or its covers with the fingers unnecessarily, because every touch imparts a trace of sodium chlorid from the skin and tends to reduce the efficiency of the process a little by bringing in some foreign ions. The circuit is completed through the usual pad electrode applied to any convenient part of the patient; the zinc electrode of suitable size is held on the rodent ulcer and the current is slowly turned on until a current of 5, or 8, or 10 milliamperes is reached, according to the size of the electrode used.

4 Secondary Suture of Sciatic Nerve.—Sherren reports a case of complete division of the great and small sciatic nerves at the lower part of the sciatic plexus, the result of a bullet wound. He sutured the distal end of the great sciatic to the central end of the lumbosacral cord and second sacral nerve, enclosing the junction in a decalcified bone tube. The peripheral end of the small sciatic he sutured into a small transverse cut in the great sciatic below the point of union to the lumbosacral cord and second sacral nerves. Six weeks after the operation a prick was appreciated over nearly the whole of the small sciatic area, and a week later sensation was restored over the whole of this area. The operation was done six months after the accident occurred. Six months after the operation deep touch was appreciated and well localized over all the affected area, sensibility to prick has been restored to the leg, but the foot remains insensitive to this stimulant.

5 Idiopathic Dilatation of Rectum and Colon.—The patient, whose history is given by Fletcher and Robinson, was a boy 12 years of age. Except for the large size of the abdomen and a tendency to constipation, nothing was noticed by the boy's parents until about two weeks before his admission to the hospital. The rapid wasting with great abdominal distension, accompanied by vomiting and obstinate constipation, suggested an acute condition and closely simulated tuberculous peritonitis. An operation was decided on. A mid line incision was made below the umbilicus and a large tense bluish colored tumor presented, with very large distended veins coursing over it, and with a lace like pattern on its surface, due to the hypertrophied and separated muscular bundles. The bladder was attached to the lower part in front. The swelling was proved to be free at the sides and in front, and to extend upward in the middle line to the ensiform cartilage. To explore this further the incision had to be extended considerably upward, and the tumor was brought out of the belly. The following was found to be the condition of things. The mid line swelling started from the pelvic floor and expanded immediately like the body of a flask, above the navel it began to narrow into the neck of the flask, but yet its circumference was as large as a man's arm. Just below the ensiform cartilage there was a somewhat acute bend to the left, and the gut with almost the same caliber, went straight down into the left iliac fossa, formed a loop, and became continuous with the descending colon. Further exploration showed that the dilatation continued along the descending and transverse colon, with very little diminution in size until the hepatic flexure was reached. The ascending colon was only slightly enlarged, and filled with some hard fecal lumps, and the cecum and appendix were normal. The colon beyond the hepatic flexure contained many pounds of soft, dark fecal material, which was squeezed out through the rectum by gradual pressure on the gut from within, with dilatation of the anal canal by the assistant's finger. It was remarked at the operation when this had been evacuated that the hypertrophy of the bowel wall was so great as to feel "as thick as the sole of a boot." The finger, after passing through the internal sphincter, entered an enormously dilated cavity whose walls were touched with difficulty. No hard or enlarged glands were felt in the mesentery, there were no signs of peritonitis nor any abnormal band. The rectum before emptying was measured with an aseptic silk ligature at its greatest circumference from mesentery to mesentery, and proved to be 19¾ inches. The abdominal wall was closed in layers. The boy remained well for about nine months, when he began to complain of abdominal pain which rapidly became worse but was relieved by ginger brandy. Diarrhea followed, the boy became comatose and died in coma 24 hours after the onset of the abdominal pain. At the postmortem the rectum and colon were found enormously distended. The authors suggest that the terminal enteritis may have been due to the ingestion of some toxic substance.

6 Importance of Parathyroids.—Forsyth has examined the parathyroids in about 60 human beings, and in over 70 different species of animals. As the result of these studies he concludes that the relationship between the parathyroids and

age, between the parathyroids and accessory thyroids, and between accessory thyroids and age is so clear as to be strong evidence against admitting for the parathyroids the physiologic value attached to them by many experimenters

The Lancet, London.

February 16

8 *Leucoderma and Analogous Changes in the Pigmentation of the Skin W H Evans.
9 *Injury and Deformity of the Epiphysis of the Head of Femur Coxa Vara. R. C Elmslie.
10 *Some Affections of Pancreas. S Phillips
11 *Large Vesical Calculus Successfully Removed by Suprapubic Operation. H Littlewood.
12 *Cancer of the Esophagus. E Pratt.
13 Value of Bacteriologic Examination of Blood in Typhoid and Other Bacteriemias F G Bushnell

8 Leucoderma and Pigmentation of Skin—Evans holds that in no way does the nervous system have any act or part in the production or the localization of the patches of leucoderma, that the disease is in all probability due to the action of some toxin, derived from the alimentary canal, assisted by local injury and the action of light, and that the mechanism by which this is carried out is the vital action of peripatetic cells

9 Coxa Vara.—Elmslie discusses the clinical history of this affection very fully, taking up in the order mentioned its history, clinical varieties, pathology and treatment

10 Affections of Pancreas—Phillips discusses six cases of chronic interstitial pancreatitis and 20 cases of carcinoma of the pancreas which have come under his observation The paper is to be continued.

11 Vesical Calculus—Littlewood removed a calculus weighing 18 ounces and 5 drams from the bladder of a man aged 47, who stated that a diagnosis of his condition was made when he was 15 years of age Operation was refused at that time Since then he has had constant urinary trouble, frequent and painful urination, and has many times passed blood After the age of 32 the symptoms became so aggravated that an operation had to be done

12 Cancer of Esophagus—The case reported by Pratt was one of primary tumor of the esophagus, situated just above the diaphragm, with secondary tumors of the liver

Journal of Obstetrics and Gynecology of the British Empire, London.

February

14 *Chronic Septic Infection of the Uterus and Its Appendages A. Donald.
15 *Pathology of Chronic Metritis W F Shaw
16 Intractable Uterine Hemorrhage and Arteriosclerosis of Uterine Vessels E. H B Macdonald.
17 Case of Vesical Calculi Due to Perforation of Bladder by Suppurating Dermoid Tumor of Ovary J A. C Kynoch

14 Chronic Septic Infection of Uterus and Appendages—Donald gives a comprehensive account of the progress and results of certain inflammatory processes as they infect the uterus, tubes and ovaries

15 Pathology of Chronic Metritis—Shaw gives the results of the microscopic examination of 38 uteri extirpated for chronic metritis alone, and of 7 extirpated for chronic metritis with some other concurrent disease In three cases there was carcinoma of the cervix, in two intramural fibroids, in one a tubo ovarian abscess, and in one double ovarian disease For comparison he also examined 23 normal uteri from patients of various ages and the endometrium removed by curetting in 50 cases of endometritis He found that the hemorrhage of chronic metritis does not depend on changes in the vessel walls of the mesometrium In 21 instances the vessels were not increased in number nor were any changes observed in the vessel wall but in the histories of these 21 hemorrhage was of quite as frequent occurrence as in the other 17 Endometritis was present in each of the 38 cases The changes in the connective and muscular tissues were also studied carefully and are reported on at length Shaw concludes that chronic metritis is a simple hypertrophy of the mesometrium and is not a connective tissue hyperplasia

Glasgow Medical Journal.

February

18 Need of Progressive Study of Industrial Diseases J W Allan
19 *Treatment of Conjunctivitis A F Fergus.
20 Plea for Study of the Deaf Child and for Teaching of Speech to the Semi-deaf and Semi mute (con.) J K. Love
21 *Treatment of Neurasthenia. W F Somerville
22 *Case in which the Radical Mastoid Operation was Performed for Purulent Otitis Media. J G Connal
23 Throat Department of Glasgow Royal Infirmary J Mac Intyre.

19 Treatment of Conjunctivitis—Fergus compares the modes of treatment of conjunctivitis in vogue 25 years ago with those now employed.

21 Treatment of Neurasthenia.—Somerville advises rest in bed for several weeks, with judicious feeding, massage passive movements and then resistance exercises and the high frequency current in the treatment of neurasthenia On the whole, his treatment does not differ from that employed by others

22 Radical Mastoid Operation.—When seen for the first time Connal's patient, a boy 12 years of age, had a primary diphtheria of the external auditory canal The diagnosis was confirmed microscopically On account of subfebrile temperature and a slightly fetid purulent discharge from the ear a *radical mastoid operation was done After the operation* there was a persistent elevation of temperature, associated with pain in the joints which yielded to administration of sodium salicylate

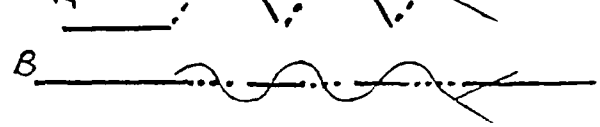
Revue de Chirurgie, Paris

Last indexed XLVII, page 2126

24 (XXVI No 11 pp 607 784) Frequency of Bony Prominence Above Internal Condyle (Apophyse sus-epitrochléenne) C Féré
25 *Congenital Talipes Varus (Pied varus congt) De Vlaccos
26 *Radical Treatment of Inguinal Hernia (Hernies inguinales) L. Gratschoff Commenced in No 10
27 (No 12, pp 755-948) *Evacuation of the Parotid Cavity by Resection of the End of the Jaw (Tridement de la loge parotidienne) L. Bérard and R Leriche
28 Nature and Origin of Cysts in the Bones Especially Simple Cysts of the Long Bones. (Kystes des os.) F Kümmer
29 Treatment of Arteriovenous Aneurism (Anévrisme artério) D J Cranwell
30 *Removal of Vas Deferens and Seminal Vesicle in Genital Tuberculosis. (Vaso vésiculectomie.) R Baudet and L. Kendirdjy Commenced in No 9
31 *Operative Indications in Old Traumatisms of the Skull (Traum anciens du crâne) L. Tixier Commenced in No 11

25 Congenital Talipes Varus—De Vlaccos ascribes this condition to deficient amniotic fluid, and relates the details of three cases which sustain this view In treatment, the position of the knee and hip joints must be regulated, and if a cast is applied, it must include part of the pelvis If the abductors are much contracted, he advises tenotomy at once instead of wasting time on orthopedic measures

26 Radical Treatment of Inguinal Hernia—Gratschoff's method has already been described in THE JOURNAL, on page 758 of vol xlvi 1906 Special advantages are claimed for his method of suture which does not bind the tissues at any point The stitches are taken with a single thread of strong silk The ends of the thread are fastened to an elastic steel bow above the skin The tension of the bow tends to straighten out the thread so that by the end of eight days the thread is in a single straight line, while the tissues have yielded and the former straight incision is now a wavy line The steel bow



A suture the day of operation B a week later

is about 13 cm (5 or 6 in) long with a perforated bulging tip at each end Two small hooks and a catch to hold the thread are soldered on the convex side and to these the thread is fastened With a curved needle the thread is then passed through the skin 1 or 2 cm from the inner end of the incision then through the internal pillar of the ring and the external pillar, through the internal pillar a second time and so on until the necessary number of stitches have been taken when the thread is brought out through the skin about 1 cm

from the outer end of the incision As a rule, two stitches for each pillar are sufficient The thread is then drawn taut and fastened to the curved bow At the end of eight days the bow and suture are removed. He says that with this technic the radical operation is completed in ten minutes, including the anesthesia The danger from the anesthesia and from infection are comparatively slight, and he declares that there is no danger of embolism In case of recurrence the simple operation can be done again without fear This technic is contraindicated only in cases with a defective posterior wall in the inguinal canal

27 Evacuation of the Parotid Cavity—Bérard and Leriche had occasion to remove a large tumor which had recurred in the parotid region and also two other malignant tumors at the same point in other cases Instead of blind groping in the parts, they evolved a technic for systematic access to the region by resection of the entire end of the jaw, including the posterior condyle After perfecting the technic on the cadaver they followed it in two more recent cases, with eminently satisfactory results, as they relate in detail with illustration

30 Extirpation of Vas and Seminal Vesicle in Case of Tuberculosis of the Genital Organs—Baudet and Kendirdjy discuss the indications and contraindications for this operation Among the latter are concomitant cystitis or advanced lesions in the lungs Bad general condition is not a contraindication if it is presumably the result of the genital tuberculosis, and the age need not be taken into consideration The operation has been done on a child of 3 and on a man of 62 It is indicated in case of a urinary fistula due to the tuberculous affection of the seminal vesicle, in case of rectal obstruction or urinary disturbances not due to cystitis, when the seminal vesicles are much enlarged or continue to increase in size after subsidence of the epididymitis under treatment, and also when manifest lesions exist along the vas deferens Under other conditions the operation is regarded as too serious to compensate for the possible gain Forty seven cases are reviewed and summarized, the list including a number of unpublished cases The perineal route was followed in 30, Young's method in 3, the inguinal route in 6, the Kraske or sacral route in 2, and the parasacral in 5 Four of the case histories are from Baudet's own experience and 8 from Roux's

31 Operative Treatment of Old Traumatic Lesions of the Skull.—Tixier concludes from his study of this subject that too little attention has been paid in the past to the cerebrospinal fluid in the pathogenesis of symptoms from traumatism, recent or remote He also emphasizes the necessity for investigating the past history for an accident to the skull in all cases of brain trouble He declares that Jacksonian epilepsy should be regarded in the same light as a motor or sensory cortical paralysis, in connection with localization of the symptoms Besides this form, generalized epilepsy may be observed as a sequel to an accident to the skull in individuals free from any nervous taint, and benefit is liable to follow trephining in such cases Young children display a great tendency to diffuse symptoms consecutive to circumscribed localized traumatism affecting the skull. Even general epileptic seizures in adults are not rare as the consequence of a traumatism affecting regions other than the Rolandic area Headache may resist all palliative measures, and by its intensity may demand surgical intervention Such symptoms as contractures, signs of organic decay, coma and the like, although usually regarded as grave and incurable, are likely to retrogress under appropriate surgical treatment of the cranial lesion. In short, Tixier does not recognize a single absolute contraindication to surgical treatment, saying that it is never too late to operate and trephining offers the only chance of recovery for patients who have exhausted all the resources of medical therapeutics Lumbar puncture is the only means of determining quantitative or qualitative modification of the cerebrospinal fluid Undue pressure from this fluid is responsible for many of the symptoms of trauma affecting the skull A chronic lesion left from some old injury may induce a reaction on the part of the meninges whose existence is revealed by the presence of lymphocytes in the centrifugated sediment This reaction may be observed long after the acute stage is past Lumbar puncture also relieves undue tension of the cerebrospinal fluid and thus banishes the symptoms from this cause Headache, vertigo, edema of the papilla, epileptiform seizures and the like are sometimes favorably influenced by withdrawal of the excess of cerebrospinal fluid, but the results are liable not to be permanent, as the same cause that produced the hypertension in the first place induces it again. In operating for an old trauma of the skull, trephining is more or less an exploratory operation, and the opening should be made large In case the cortex presents a normal appearance, before proceeding to more radical measures, it is wise to wait a while to see if the mere trephining will not relieve without further intervention He advises meningo periosteal suture to prevent trouble later from adhesion between the dura and cortex The results have been much better with definite resection of the bone than with temporary resections In case of recurrence or of complete or relative failure, he advises not to hesitate to operate again It frequently happens that at the first operation the lesion was overlooked or the lesions found were supposed to be responsible for all the trouble A series of operations may thus be extremely important, reports of patients cured after a third operation are not exceptional in medical literature

Revue de Gynécologie, Paris

Last indexed XLVII, page 1333

32 (X, No 5, pp 771 900) *Technic of Gynecologic Laparotomy (Soins pré-opératoires, détails de technique opératoire.) L Dartigues.
33 *Isolated Flaps of Peritoneum for Patching the Viscera (Greffes péritonéales) L Loewy
34 *Introduction of Medicinal Substances into the Uterine Mucosa by Electricity (Introduction d'ions en gynécologie.) A. Zimmern
35 *Pregnancy in a Cornu of the Uterus (La grossesse angulaire) P Lequeux.
36 *Tuberculosis of the Vulva (Tub de la vulve) N Bender
37 (No 6 pp 963 1152) Torsion of Hematosalpinx Complicating Congenital Atresia of the Vagina. (Torsion des hématosalpinx etc.) M Chaput
38 *Reciprocal Relations Between Epithelomata of Uterus and Ovary (Epithéliomas de l'ut. et de l'ovaire) Albertin and A. Jambon
39 *Tuberculosis in Hernias (Tub herniaire et vagino péritonéale) G Cotte
40 *Acute Hemorrhagic Pancreatitis with Diffuse Fat Necrosis. (Pancréatite aigue hém) C. Lenormant and P Lecène

32 Laparotomies in Gynecology—Dartigues reviews his experiences with 1,000 laparotomies at Pozzi's clinic, and describes the preferred technic and preparation, with 37 illustrations Among the points emphasized is the advisability of refraining from saline injection or infusion during the first few hours after a laparotomy, as otherwise the oozing is much more profuse and the tendency to hemorrhage is augmented by the increased volume of the blood, distending the blood vessels and threatening rupture or tearing out of the sutures By waiting a few hours before making the injection, the danger of hemorrhage, he states, is much reduced

33 Grafts of Peritoneum.—Loewy gives an illustrated description of the process of healing when an isolated flap of the peritoneum has been used to cover or patch a defect in a viscus By using an isolated flap there is no danger of a persisting and vascular band between it and the rest of the peritoneum, while at the same time the flap heals in place and becomes an integral part of the surface on which it is implanted, according to experiments on animals He further describes 4 cases in which the method was successfully applied in the clinic In 2 cases the "Loewyte," as the transplanted flap is called, was used to cover a defect in the uterus, in another two flaps were used on the liver after removal of a hydatid cyst In another case, removal of an ovarian cyst left a defect which was covered with a flap of omentum held in place with four stitches In other cases the defect was packed with the flap of omentum or the flap was applied after supravaginal hysterectomy, or to the tube after removing an adherent loop of intestine

34 Ions in Gynecology—Zimmern relates favorable experiences at Pozzi's clinic with drugs introduced into the uterine mucosa by means of electrolysis

35 Pregnancy in the Uterine Cornua—Lequeux concludes his study of this subject with the remark that rupture is rare

in this condition, which is half way between normal and tubal pregnancy Expectant treatment is the principle to be followed, but when the diagnosis is uncertain, there should be redoubled caution There are occasionally pains and hemorrhage during the first four months The lateral location of the tumor, without tendency to slide down toward the pouch of Douglas, and the finding of the round ligament entirely outside the hypertrophied mass, are the signs that differentiate an "angular" from an ectopic pregnancy

36 Tuberculosis of the Vulva.—Bender has encountered 2 new cases of tuberculosis of the vulva and has collected others on record, bringing the total to 48 Besides the classic ulcerative form, there is another variety with merely hypertrophy, edema, and an aspect suggesting elephantiasis Traumatism was noted in a number of cases, and transmission from the male was evident in others Sometimes the lesions recur again and again after extirpation and energetic treatment, in other cases a complete cure is realized In some cases the course of the affection is extremely slow, from 7 to 17 years in some instances Treatment should be by extensive removal into sound tissue, with immediate suture, he says, except in presence of extensive tuberculous lesions elsewhere Multiple fistulas should be slit over a grooved sound and thermocauterized.

38 Concomitant Epitheliomata of Uterus and Ovary.—Albertin and Jambon describe 2 cases of simultaneous cancer in uterus and ovary In one case the uterine tumor was primary and in the other the ovarian They affirm that malignant disease of the ovary requires ablation of the uterus and the adnexa of the other side, and, likewise, that hysterectomy for malignant disease should invariably be accompanied by bilateral oöphorectomy The nervous disturbances that may follow are less to be feared, they declare, than ovarian or uterine metastasis

39 Tuberculosis in a Hernia.—Five cases of tuberculous processes in a hernia are reported, accompanied by vagino peritoneal complications One patient was a child of 7, the others were men between 16 and 33 The lesions were apparently primary in all, and were treated by resection Other cases that have been published are summarized, a total of 136

40 Acute Hemorrhagic Pancreatitis.—Lenormant and Leçène had occasion to operate on a young man presenting suddenly symptoms of severe, acute ileus and peritonitis of unknown cause Nothing abnormal was found at the laparotomy except small white spots, like drops of candle grease, noticed at certain parts of the great omentum The appendix, stomach and intestines were normal, and the abdomen was sutured without further enlightenment, but the postmortem findings thirty six hours later revealed inoperable hemorrhagic pancreatitis with diffuse fat necrosis, on a basis of an old chronic, mild interstitial pancreatitis The particulars of 36 similar cases from the literature are added Six of the otherwise doomed patients were saved by a prompt operation This allows the pancreatic secretions a way of escape through the drain It is their retention, the authors state, that sets up the fat necrosis and other mischief In Porter's case the pancreatic affection recurred a year later and an operation was again undertaken with successful outcome This time the trouble was a fluctuating focus in the head of the pancreas

Beiträge z. Klinik der Tuberkulose, Würzburg

Last indexed XLVII page 1689

41 (VI No 3 pp 228 326) *Tuberculosis in Early Childhood (Tub im frühen Kindesalter) A. Schlossmann
42 *The Neutrophile Leucocytes in Specific Treatment of Chronic Pulmonary Tuberculosis (Alt Tuberkulin, Neu Tuberkulin Koch Tuberculinum Denys und Hetol) Uhl.
43 Case of Regular Premenstrual Hemoptysis in Tuberculosis (Primenstruellen Lungenblutungen) A Scherer
44 *Tuberculosis of the Esophagus (Tub des Oesoph.) H v Schrötter
45 Relations Between Hemoptysis and Fibrin Casts in Sputa (Beziehung zwischen Hämoptoe und Fibringerinnsel im Auswurf) J Port.
46 (No 4 pp 327-431) *Collateral Tuberculous Inflammation (Kollaterale tub Entzündung) N P Tendeloo
47 Tuberculin Diagnosis of Pulmonary Tuberculosis (Zur Tub Diagnostik der Lungentub) F Junker
48 Alcohol and Tuberculosis (Schlusswort) Wolff
49 Experimental Study of Action of Old Tuberculin (Wirkungen des Alttuberkulins) C Schröder

41 Tuberculosis in Early Childhood.—This article is the address prepared by Schlossmann for the Fifth International Tuberculosis Conference recently held at The Hague. He regards Behring's act in calling attention to the connection between infection in infancy and the development of tuberculosis in later years, as the most important progress in the campaign against tuberculosis since the discovery of the tubercle bacillus Careful study of the records and wide personal experience have convinced Schlossmann that the death rate from tuberculosis in infancy is much higher than indicated by the official reports He regards 6 8 per cent as the general average death rate from tuberculosis during the first year of life He accepts it as established that a primary tuberculous affection of the lungs and bronchial glands can originate from the intestinal tract, and that infection by way of inhalation is of much less frequent occurrence. He is also convinced that tuberculosis in the overwhelming majority of cases is a "child's disease" Persons who escape it during childhood seldom develop it later This assumption explains among other things the larger proportion of cases of tuberculosis among the poor The children of the well to-do are better protected during childhood, while in later life the conditions are more even in the two classes Prevention of tuberculosis among children is a problem that can be solved with comparatively little effort and expense If only a tenth of the sums spent hitherto in combating tuberculosis among adults were diverted to prophylaxis of the disease among children, inestimable good might result *The rearing of human beings free from tuberculosis is a much easier task*, he asserts, than the attempt to cure the already existing disease

42 Influence of Tuberculin Treatment on the Neutrophile Leucocytes.—On page 494 of vol xlii, 1904, THE JOURNAL published a summary of Arneth's views in regard to the importance of the modifications in the neutrophile leucocytes as an index of the course of infectious diseases Uhl has been applying Arneth's method as a means of tracing the progress of tuberculous processes under specific treatment at the Edmundsthal sanatorium No improvement in the blood picture was obtained with cinnamic acid, but the blood picture improved constantly under the influence of tuberculin treatment, with very few exceptions Even very small doses were followed by unmistakable improvement

44 Tuberculosis of the Esophagus.—In the 2 cases reported by von Schrötter the right lung was primarily affected and the corresponding part of the esophagus became involved. He was able to inspect the lesion directly with the esophagoscope, the first time, he says, that this has been done in the clinic. He believes that a large focus elsewhere is a prerequisite for *a tuberculous lesion in the esophagus, with adhesion of the wall.*

46 Collateral Tuberculous Inflammation.—Tendeloo remarks that many tuberculous foci in the lungs first manifest their presence by collateral inflammation, as in the case of hydrops of the knee and in many cases of apparently primary tuberculous pleurisy The orginal focus may be so small that it is overlooked even at autopsy He presents further evidence to prove that the tubercle bacillus and its toxins are liable to induce collateral inflammation near or at a distance, and also that such inflammation is liable to retrogress completely or to subside into cheesy degeneration and connective tissue organization

Berliner klinische Wochenschrift.

50 (XLIV No 3 pp 65-92.) Ascending Tuberculosis of Female Genital Tract (Ascend. Tub im weiblichen Genitaltrakt) P v Baumgarten
51 Subglottic Laryngoscopy (Subglottische Laryngoskopie) M Senator
52 The Silver Spirochetes (Zur Kritik der Silberspirochäte) E. Gierke
53 Study of the Production of Mucus in the Stomach (Schleimabsonderung im Magen.) M Lewsner Commenced in No 2.
54 The Breathing Test (Atemprobe) H Marx
55 (No 4 pp 93-124.) Catalytic Influencing of Autolysis of the Liver by Colloidal Metals (Beeinflussung d. Leberautolyse durch kolloidale Metalle) M Asculi and G Izar
56 Importance of the Albuminoid Precipitated by Acetic Acid in Children's Urine (Bedeutung des durch Essigsäure Fällbaren Eiweiss im Harn der Kinder) H Finkelstein

57 Which Elements of the Inflamed Tissues Simulate Silver Spirochetes, (Welche Gewebsbestandelle etc.) H Fried enthal

58 Reliability for Diagnosis and Specificity of the Complement Binding Method in Typhoid and Paratyphoid (Komplementbindungsmethode) J Leuchs

59 Study of Fever (Einiges über das Fieber) H Beltzke

Deutsche medizinische Wochenschrift, Berlin and Leipsic

60 (XXXIII No 4 pp 129 168) *Treatment of Endocarditis (Endocarditis.) G Hoppe-Seyler Clinical lecture.

61 *Action of Arsenic on Trypanosomes and Spirochetes (Wirkung des Atoxyls auf Trypanosomen und Spirochäten) Uhlenhuth, Gross and Bickel

62 *Excessive Secretion of Gastric Juice During Digestion. (Ueber digestiven Magensaftfluss) I Boas

63 *Change in Chemistry of Stomach After Gastroenterostomy and the Influence of this Operation on Ulcer and Carcinoma of the Stomach. (Aenderung des Magenchemismus) M Katzenstein Commenced in No 3

64 *Technic of Intravenous Therapy (Zur Methodik der intravenösen Therapie.) H Strauss

65 Voluntary Dilatation of the Pupil (Willkürliche Erweiterung der Pupillen) M Reichardt.

66 New Remedies Specialties and "Patent Medicines" (Neue Arzneimittel etc.) F Zernik.

67 Vegetable Diet as the Diet for the Masses and in Therapeutics (Vegetarische Diät als Volksernährung und als Heilmittel) W Ebstein

68 *Professional Secrecy (Zur ärztlichen Schweigepflicht) E Landsberg

60 **Treatment of Endocarditis**—Hoppe Seyler declares that the treatment of endocarditis consists in absolute quiet, after the causal trouble has been discovered and corrected so far as possible Suppurative otitis media, follicular tonsillitis, chronic appendicitis, abscess in the prostate, adnexitis, gonorrhea or a pneumococcus affection may be the underlying cause, ignored in some instances He relates the case of a girl with repeatedly recurring endocarditis with high fever, infarcts in the lungs, anemia, emaciation, etc., who was supposed to be tuberculous, but who was promptly cured of all these symptoms and restored to apparent health by removal of the tonsils on account of recurring tonsillitis In case of articular rheumatism with endocarditis, sodium salicylate should be pushed to 4 or 6 gm (60 to 90 grains) a day for adults, unless symptoms of very severe intoxication develop Co existing nephritis is no contraindication, as the nephritis is a consequence of the rheumatism, and energetic treatment of the latter cures both In case of a septico pyemic affection, besides the local measures, he has obtained good results with quinin, giving 0 3 or 0 5 gm quinin hydrochlorate several times a day to act on the bacteria in the blood. It may have be kept up for weeks, adding iron in case of anemia. This treatment acts on the deposits of bacteria in the endocardium, but it acts very slowly, so that the lack of evidences of improvement in the first few weeks should not deter from continuing the treatment If not tolerated by the mouth, the quinin can be given by the rectum or, possibly, subcutaneously The most dangerous form of endocarditis is that induced by pneumococci, and hence, the use of the antipneumococcus serum seems rational, although it is not certain in its effects, according to the reports to date Other curative sera sometimes benefit and sometimes do not The physician's examination must be as little disturbing as possible. An exacerbation has frequently followed too prolonged percussion, auscultation, etc Visits, talking, listening, bright light, noises and strong odors must be kept away from the patient

In case of pain in the heart region a few leeches or a wet cup applied to the interspaces are useful, or a light ice bag or coil of light rubber tubing through which cold water is passed Light, nourishing diet, nothing hot or cold slightly acidulated water to drink, and heart tonics should be the main reliance, with scrupulous avoidance of abrupt movements likely to induce embolism In the chronic form, so long as the heart shows much incompetency, the patient should stay in bed The urine should be repeatedly examined for albuminuria as nephritis is liable to develop suddenly without signs of its existence except from the lack of effect from the heart tonics Diaphoretics, especially pilocarpin, should be avoided as also moist heat, light and steam baths Vegetable laxatives are useful, but calomel, he states, should be avoided on account of its liability to induce irritation in the kidneys as also sulphate of magnesia and soda sulphate and mineral waters containing them If the latter are absorbed and eliminated through the kidneys they may irritate them still further Symptoms of valvular trouble require rest and regulation of the heart action, local application of cold is useful here, and possibly also the bromids, valerian, and, in case of angina pectoris, nitroglycerin, etc. A mild and yet effectual means of regulating and stimulating the heart action, especially with anemic patients, is administration of pills of camphor and reduced iron each 6 gm (about 90 grains), in 90 pills, from 3 to 6 daily for weeks Wet packs to the chest are not well tolerated, and warm or cold baths before retiring are rather exciting than otherwise in case of heart trouble In the after treatment he warns that the patients must keep very quiet on hot, damp days, and that all sports are dangerous, including bicycling The sensation of fatigue is not experienced with sports until the stage of exhaustion has been reached, while with walking, mountain climbing, Swedish exercises, etc., fatigue is an early sign. He relates an instance of the loosening of an infectious thrombus in the arm or leg in the course of horseback riding, leading to a fatal exacerbation of the long past endocarditis Tepid sea water baths are excellent, but sea bathing must be avoided.

61 **Action of Arsenic on Trypanosomes and Spirochetes**—Encouraged by Koch's reported success with arsenic in sleeping sickness, systematic experimental research with it in other trypanosome and spirochete affections is being conducted at Berlin The results to date have been rather favorable, so that a trial of arsenic is urgently recommended in trypanosome affections in horses and those due to spirochetes in fowls, and possibly in syphilis

62 **Excessive Secretion of Gastric Juice During Digestion.**—Besides the continuous excessive secretion of Reichmann's disease and the paroxysmal hypersecretion accompanying certain nervous affections and undoubtedly due to nervous influences, there is a third form of excessive secretion occurring only during the process of digestion Boas has had occasion to observe this latter form in 12 patients, all men The most prominent symptom was the emaciation, the patients losing 20 or 30 pounds in a comparatively short time, probably from the waste of so much gastric juice Its effect on the intestines is to induce extreme constipation The subjective symptoms are similar to those of chronic nervous dyspepsia, while the splashing sound is of frequent occurrence Its presence under these conditions, he adds, is a warning to be very cautious in basing deductions on it in practice. The resemblance of the clinical picture to that of nervous dyspepsia and atony of the stomach has convinced him that many cases diagnosed in the past as nervous dyspepsia or atony of the stomach, were in reality cases of this digestive hypersecretion The anomaly is best diagnosed by examining the stomach content fasting, again after a test breakfast without fluids, and again after another test meal Treatment should aim to bring the weight up to normal, to avoid substances liable to stimulate the gastric secretion, and to promote the digestion of starch, which seems to suffer most from the condition These indications are met by a diet of albumin, fat, sugar or dextrin, and white bread crust, alkaline beverages at meals and systematic treatment with alkalies, preferably a teaspoonful of sodium citrate four times a day One of his patients thus took nearly three pounds of sodium citrate in the course of three months with constant benefit and final restoration to normal He asserts that he has never witnessed any untoward results from prolonged administration of the vegetable alkalies, given alone or with a little magnesia

63 **Remote Effects of Gastroenterostomy in Ulcer or Cancer of the Stomach.**—Katzenstein has been conducting research on dogs and comparing the results with clinical experiences, and has found that bile and pancreatic juice always find their way into the stomach after a gastroenterostomy This occurs at first continuously and later only after ingestion of food Their appearance in the stomach is hastened by the presence of fat in the food. In consequence of this admixture of alkaline intestinal juices, the stomach acidity is reduced by a chemical reaction and also by reflex inhibition Pepsin is rendered inactive by even a transient alkaline reaction, but Katzenstein states that trypsin is not much affected by a transient acid

reaction The hydrochloric acid pepsin digestion is thus much impaired by a gastroenterostomy One of the practical results of this research is the explanation of the benefit from gastro enterostomy in case of cancer of the stomach Improved motor conditions are not the only factor, still more important, probably, is the action of the pancreatic juice on the surface of the cancer which, he asserts, it presumably digests and thus checks the growth of the cancer The operation is con sequently indicated in case of inoperable cancer of the stomach not only in the pyloric region, but also elsewhere Another point to which he directs attention is the prompt healing of an ulcer when the secretion of hydrochloric acid can be checked completely This can be accomplished by food rich in fats frequent meals and large amounts of fluids, water by reflex action induces an increased secretion of bile and pancreatic juice and an increased outflow of these juices into the stom ach

64 **Technic for Intravenous Injection**—Strauss gives an il lustrated description of his technic for intravenous injection of strophanthus or digitalis in serious acute cardiac incompe tency, or for the few other indications for intravenous medi cation, of which he recognizes only acute sepsis or pyemia and acute articular rheumatism refractory to the salicylates He makes the injection extremely slowly, choosing the most prom inent vein, the farthest from the artery, after application of a tourniquet above

68 **Professional Secrecy from a Lawyer's Standpoint.**—Landsberg, professor in the law department at Bonn, here dis cusses various legal aspects of professional secrecy in case of proceedings in the criminal and civil courts In conclusion, he remarks that physicians are apt to overestimate the dangers for them of failure to respect the principle of professional secrecy The persons liable to claim damages from them in case they have failed to maintain professional secrecy are, as a rule those whose earning capacity or position depends on the public's ignorance of their diseased condition The nurse who persists in retaining her position although she knows that she is endangering the health of the child in her charge, the phthisical dairy superintendent who keeps up his work although amply warned by the physician as to the danger of infection of the community—persons of this cate gory earn their money under false pretenses, as it were, and it is simple equity, Landsberg asserts, that damages can not be claimed for loss of a position held only under false pre tenses He cites Roman law and more recent German juris prudence to establish this point, adding that this principle of equity will remain as long as there is any law, and physicians can rely confidently on it

Münchener medizinische Wochenschrift.

69 (LIV, No 5 pp 153 200) Incarceration of Three Appendices Epiploicæ in Hernia. (Brucheinklemmung von App epipl) H Mohr

70 *Influencing of Heart Action and Blood Pressure by Pressure on Painful Points (Beeinflussung der Herztätigkeit und des Blutdrucks von schmerzhaften Druckpunkten aus) Rumpf

71 *First Thousand Childbirths under Scopolamin Morphin (1 000 Geburten im Skopolamin Dämmerschlaf) C J Gauss

72 *Scopolamin Morphin in Obstetrics. (Skop Morph in der Geburtshilfe) Preller

73 *Technic of Spinal Anesthesia under Scopolamin Morphin for Abdominal and Gynecologic Operations (Lumbalanästhesie im Skop Morph Dämmerschlaf) Penkert.

74 *Operative Treatment of Menacing Profuse Gastric Hemor rhage (Op Therapie bei lebensgefährliche profusen Blu tungen) G Hirschel

75 *Preparation for Operations on the Hands (Op an den Händen und deren Vorbereitung) K Vogel

76 *Alcohol in Obstetrics and Gynecology (Alk in der Geb und Gynäkologie) A Theilhaber

77 Nervous Eructation (Nervöses Aufstossen) P Adler

70 **Influencing the Heart Action by Pressure on Painful Points.**—Rumpf gives directions for applying this means of diagnosis to exclude simulation He has found it very valu able in differentiating certain cases of general neurosis accom panied by neuralgia or local pain and tenderness Excitation of the painful point causes temporary acceleration of the pulse or first slowing and then acceleration of the pulse a weaker sometimes irregular pulse rate dropping of a few waves in the radial artery cyanosis of the face and occasionally, a rise or fall in the blood pressure On cessation of the exci tation these symptoms soon subside, the changes in the blood pressure being the last to right themselves In some cases he observed also profuse local sweating in the axilla brow and hands These findings require a special excitability on the part of the nervous system or heart to produce them In one of the typical cases described, a healthy man was injured in a railroad accident and complained of pain in the back of the head, sensitiveness to noises, forgetfulness and irritability, impairing his earning capacity As the painful point in the occipital region was rubbed the pulse became small, the face pale and cyanotic and sweat poured out of the axilla and hands The pulse increased from 100 to 136 Rubbing other points failed to induce any of the above symptoms, and the course of the case confirmed their positive interpretation Rumpf writes the article to call attention to the technic of the examination Disregard of any of the points completely invalidates the results The examination must be done with the patient in bed, where he has lain quietly for some time If the heart action is previously irregular the findings are unreliable The patient must breathe quietly and regularly during the entire test A single test is not so reliable as when the findings of several repetitions are compared It is impor tant, further, to apply the test to the corresponding sound side or region for comparison In another case described rub bing the most painful spot on the right side, after a railroad accident affecting this side, sent the pulse from 88 to 144, proving to his satisfaction that the severe neuralgia of the right lumbar and pelvic region observed was the result of the trauma

71 and 72 **Report of One Thousand Childbirths Under Scopol amin Morphin Anesthesia.**—Gauss writes from Krönig's gyn ecologic clinic at Freiburg to praise the scopolamin morphin "twilight sleep" in obstetrics The mortality of the children has fallen 3 per cent since this technic has been adopted, the average amount of blood lost by the mothers in 303 cases was 277 7 gm, a low physiologic average Any deviation from the technic he has described—based on the patient's power of perception at the time—upsets all the conclusions in regard to the method It stands or falls with this technic and he disclaims all responsibility where it is not scrupulously fol lowed It requires great attention and close supervision of the patient The special features of the technic and the dosage were given on page 912 A card is filled out for each patient, recording the subjective symptoms (fatigue, thirst, pains in sacrum abdomen perineum), and the objective symptoms (sleep during labor pains or during intervals, twitching of the hands, color of the face influencing of the pain and conscious ness) The details of the childbirth are also recorded and the frequency, length and energy of the straining pains Also the details in regard to heart sounds, pulse, respiration and temperature He calls this record the "scopolamin curve" and states that accumulating testimony is all in favor of this method of inducing painless delivery Preller relates his ex periences with Gauss' technic in 120 cases they were very favorable but he recognizes a number of contraindications beyond those which Gauss accepts

73 **Spinal Anesthesia in Combination with Scopolamin Morphin for Gynecologic and Abdominal Operations.**—Penkert writes from the same clinic to commend the scopolamin morphin technic as a valuable preliminary to spinal anesthe sia He asserts that it relaxes the abdominal walls and excludes all perception of what is going on while the analgesia is complete—thus affording ideal conditions for laparotomies The technic used differs a little from Bier's larger doses of the spinal anesthetic are used but the pelvis is never raised He found the by effects of the anesthetic much less than with other technics The method is now currently employed for all abdominal and gynecologic operations in the clinic where it is regarded as the most humane technic known to date

74 **Operative Treatment of Menacing Gastric Hemorrhage**—Hirschel reviews the experience of others in this line and re ports a case in which a man of 29 had presented hematemesis twice on one day and twice five days later The loss of blood was excessive the last time and the patient was pul[illegible] and only half conscious when first seen by a physician who ord[illegible]

the man's removal to a hospital At operation, which was performed at once, nothing abnormal was discovered in the outer aspect of the stomach, but an incision in the lesser curvature showed an ulcer, as large as a penny, with an open ing into a small artery A portion of the stomach wall, about the size of a silver dollar, was resected and the wall then sutured Symptoms of retention later required a secondary gastroen terostomy, since which the patient has been in good health Hirschel declares that the large percentage of cancers that develop on the basis of an ulcer should turn the scale in favor of resection in doubtful cases

75 Preparation for Operations on the Hands.—THE JOURNAL has already mentioned Vogel's statements in regard to the great benefit of preliminary application of superheated air in disinfection of the hands By the intense sweating induced, germs are dislodged from the depths and swept outward so that a nearer approach to asepsis is possible than with any other technic. He here describes experiences with this method as a preliminary measure before operations on the hands, es pecially on the horny hands of toil. The hand is placed in a hot air apparatus for an hour morning and night for two or three days before the operation, otherwise the patient uses it as usual In every instance the operations thereafter on the skin and tendons were followed by primary healing In his wide experience with industrial accidents to the hand he has found it wiser to sacrifice one of the fingers so as to use it to patch up the others and to restore their function rather than to keep all the fingers with more or less impairment of function

76 Alcohol in Obstetrics and Gynecology.—Theilhaber quotes from the Iliad to show that the opposite views regarding alcohol as a tonic or as a depressant have come down to us from prehistoric days He calls attention to the influence of alcohol in inducing hyperemia in the genital organs, which con traindicates its use in all gynecologic affections with a tend ency to hemorrhage or excessive secretion and in inflammation, especially of gonorrheal origin It is also contraindicated in the menopause for the same reasons He expresses surprise that physicians in general have held back from taking a de cided stand in regard to alcoholism, although they are the leaders in the campaign against other scourges, cholera and typhoid fever, he asserts, are far from being as deadly as alco ol in the long run

Hygiea, Stockholm.

Last indexed page 914

78 (LXVIII No 12 Pp 1217 1360) *Etiology of Sympathetic Ophthalmia. (Simpatiska ögoninflammationens etiologie) J Widmark.

79 *Treatment of Migraine with Hypnosis (Behandlingen af migrän medelst hypnos) E. af Geijerstam

80 *Manifestations of the Mental Condition from the Standpoint of the Prison Do or (Sinnesbeskaffenhetsutlåtanden från fängelseläkarsynpunkt) T Petrén.

81 Spontaneous Delivery After Operative Slitting of the Cervix Uteri in a Preceding Pregnancy (Spontan förlossning efter föregående operativ klyfning af cervix uteri) E Essen Möller

82 (LXIX No 1 Pp 1 112.) Application of Physical Chemistry to the Doctrine of Immunity (Fysikaliska kemiens an vändning inom immunitetsläran) S Arrhenius

83 Blindness in the Scandinavian Countries and Finland in 1900 (Förekomsten af blindhet) J Widmark

84 Bacteriology of Air and Soil in Antarctic Regions. (Svenska Sydpolarexpeditionen 1901 1904) E Ekelöf

85 Perforation of Gastric Ulcer and 4 Cases of Perforation from Ulcer or Cancer (Ventrikelperforation) O Lundblad

86 Technic of Gastroenterostomy (Till gastroenterostomiens teknik) A Reuterskiöld

78 Sympathetic Ophthalmia in Sweden.—Widmark's tables show that the percentage of cases of blindness after sympa thetic ophthalmia in Sweden is far larger than in the other countries of Europe, reaching 18 per cent of the total num ber of cases in 1905, while the proportion in other countries during the last few years was less than 6 per cent He ascribes this mainly to the way in which the population is scattered over large areas making it difficult for the patients to seek medical help in time In his experience with 10 cases of sympathetic iridocyclitis since 1896 treatment with large doses of sodium salicylate proved successful in 80 per cent Eight of the patients recovered with good and in some cases exceptionally good vision He ascribes sympathetic ophthalmia to bacterial invasion

79 Hypnosis in Treatment of Migraine.—Geijerstam reports 15 cases of rebellious migraine in which a cure was realized with systematic application of hypnosis In 3 other patients no benefit was apparent The intensity and frequency of the attacks were reduced, without interfering with the patient's usual occupations and daily routine In 3 of the improved cases the diagnosis of migraine on a rheumatic basis was probable, but improvement was as marked in these cases as in the rest. In the first case a woman of 32 had suffered since childhood from migraine, lasting about 36 hours and recurring at irreg ular intervals There were no signs of hysteria and examina tion by an ophthalmologist and rhinologist was negative After a month of bromids, galvanism and massage, none of which gave relief, he commenced to apply hypnosis and gave 7 daily sittings, followed by the same number again after a two weeks' interval The patient was extremely hard to hypnotize, and after numerous attempts he succeeded only in inducing numbness over the entire body, and was tempted to suspend treatment, but then improvement became apparent and the patient has been entirely free from the migraine dur ing the two years since Other patients have been cured for five years or more. All his patients, with one exception, were women. Hysteria could not be positively excluded in some of the cases

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review as dictated by their merits, or in the interest of our readers

HYGIENIC LABORATORY BULLETIN No 26 M. J Rosenau Direc tor Stability of the Oxidases and Their Conduct Toward Various Reagents, Conduct of Phenolphthalein in the Animal Organism *Test for Saccharin, and a Simple Method of Distinguishing* Between Cumarin and Vanillin Toxicity of Ozone and Other Oxidizing Agents to Lipase, Influence of Chemical Constitution on the Lipo lytic Hydrolysis of Ethereal Salts By J H Kastle. Paper Pp 51 Washington Government Printing Office 1906

MANUAL OF PRESCRIPTION WRITING with a Full Explanation of the Methods of Correctly Writing Prescriptions. By Matthew D Mann A M M.D Professor of Obstetrics and Gynecology in the Medical Department of the University of Buffalo Revised by E Cox Mann M D Sixth Edition Revised and Enlarged Cloth. Pp 232 Price, $1 00 New York and London G P Putnam s Sons, 1907

PATHOLOGY AND DIFFERENTIAL DIAGNOSIS OF INFECTIOUS DIS EASES OF ANIMALS By Veranus Alva Moore B S M D, Profes sor of Comparative Pathology New York State Veterinary College Ithaca N Y With an Introduction by Daniel Elmer Salmon D V M. Second Edition Revised and Enlarged Illustrated Cloth. Pp 506 Price $4 00 net. Ithaca Taylor & Carpenter 1906

DISEASES OF THE NOSE AND THROAT By J Bruce Ferguson M.D Instructor in Diseases of the Nose and Throat in the Post *graduate Medical School New York Series Edited by Victor Cox* Pedersen A.M., M.D Lecturer in Surgery at the New York Poly clinic Medical School and Hospital. Cloth. Pp 243 Price $1 00 net. Philadelphia Lea Bros & Co 1906

ANATOMICAL TERMINOLOGY with Special Reference to the Basle Anatomical Nomenclature. By Lewellys F Barker M D, Professor of Medicine Johns Hopkins University Baltimore. With Vocabu laries in Latin and English and Illustrations. Cloth Pp 103 Price $1 00 net. Philadelphia P Blakiston s Son & Co 1907

BLOOD SERUM THERAPY Preventive Inoculation and Toxin and Serum Diagnosis for Veterinary Practitioners and Students By Walter Jowett, F R C V S D V H., Formerly Demonstrator of Com parative Pathology in the University of Liverpool Cloth Pp 204 Price $1 75 net. Chicago W T Keener & Co 1907

MODERN SURGERY, GENERAL AND OPERATIVE. By John Chalmers Da Costa, M D Professor of the Principles of Surgery Jefferson Medical College, Philadelphia. Fifth Edition Revised and En larged 872 Illustrations Cloth Pp 1283 Price $5 50 net. Philadelphia W B Saunders Company 1907

MAKERS OF MODERN MEDICINE. By James J Walsh M D Ph D LL D Professor of the History of Medicine and Nervous Diseases Fordham University Medical School Cloth Pp 362. New York Fordham University Press 1907

HISTORY OF THE ECLECTIC MEDICAL INSTITUTE Cincinnati Ohio 1845-1902 Biographical Sketches of Members of the Various Fac ulties and Graduates By Harvey Wickes Felter M.D Cloth Pp 203 Cincinnati 1902.

REPORTS OF THE TRUSTEES AND SUPERINTENDENT of the Butler Hospital Presented to the Corporation at its Sixty third Annual Meeting Jan 23 1907 Paper Pp 49 Providence.

VERHANDLUNGEN DER BERLINER MEDIZINISCHEN GESELLSCHAFT aus dem Gesellschaftsjahre 1906 Band XXXVII Paper Pp 453 Berlin Druck von L. Schumacher 1907

REPORT OF THE SUPERINTENDENT OF PUBLIC INSTRUCTION Being the Fifty fourth Report on the Public Schools of New Hampshire. Cloth Pp 498 Concord 1906

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Original Articles

THE COMMON BACTERIAL INFECTIONS OF THE DIGESTIVE TRACT AND THE INTOXICATIONS ARISING THEREFROM *

CHRISTIAN A. HERTER, M.D
NEW YORK CITY

After presenting some general considerations relative to the bacterial flora of the human digestive tract in health, and showing that none of the experimental studies made by investigators is really conclusive as to the necessity of bacterial action in the digestive tract for the maintenance of health in adult mammals of the highest type, Dr Herter proceeded

Clearly, then, the intestinal bacteria are not required to carry on the ordinary digestive processes of normal nutrition It has been supposed that the intestinal bacteria aid in the digestion of cellulose which they are undoubtedly able to decompose fermentatively This argument loses much of its force if it be true, as lately maintained by Bergmann, that most of the cellulose eaten by herbivora is provided with intracellular enzymes capable of decomposing cellulose

The real significance of the normal intestinal flora probably lies, not in any immediate relation to processes of digestion but in a wholly different direction It is impossible to avoid the entrance of bacteria into the digestive tract. The obligate bacteria (for example, *B lactis aerogenes, B coli, B bifidus*) adapt themselves to the secretions of this part of the body and ordinarily hold their own against new-comers By virtue of their adaptation, they are not ordinarily harmful to their host, but, on the contrary, they are, under some circumstances, capable of doing service by giving rise to conditions that discourage the growth of many harmless and harmful species which man can not readily exclude from his digestive tract. I believe that the chief significance of the obligate intestinal bacteria lies in their potential capacity for thus checking the development of other types of organisms capable of doing injury

Speaking of the defensive action of the digestive juices Dr Herter said that the normal human organism is provided with more or less efficient methods of defense against bacterial invaders The acidity of the gastric juice, for instance, checks the growth of many non-sporulating bacteria and is, in a measure, destructive to most varieties If, however, bacteria are administered in very large numbers there is a chance that some of them will find their way into the intestine This is particularly true when microbes are taken into the empty stomach or into a stomach with defective motility which secretes little gastric juice of low acidity Dr Herter goes on to say

A long, largely anaerobic intestinal tract permitting gradual resorption of the contents is a physiologic necessity in order that a loss of water and its detrimental consequences may be spared the organism The presence in the colon of immense numbers of obligate microorganisms of the *B coli* type may be an important defense of the organism in the sense that they hinder the development of that putrefactive decomposition which, if prolonged, is so injurious to the organism as a whole. This adaptation is the most rational explanation of the meaning of the myriads of colon bacilli that inhabit the large intestine This view is not inconsistent with the conception that under some conditions the colon bacilli multiply to such an extent as to prove harmful through the part they play in promoting fermentation and putrefaction An alkaline reaction of the medium appears to favor their putrefactive functions if peptones be present

The influence of reaction on the growth of intestinal anaerobes was studied very carefully by Dr A J Wakeman, who found that the growth of putrefactive anaerobes is favored by neutral reaction and restrained by the presence of acids This explains the favorable influence of milk (containing lactic acid formers) in controlling putrefactive decomposition in the digestive tract. Dr Herter has this to say with reference to the aërobic and anaerobic conditions in the digestive tract

AEROBIC AND ANAEROBIC CONDITIONS IN THE DIGESTIVE TRACT

There are many conditions which influence the character and extent of bacterial decomposition in the alimentary tract among them are the chemical character of the food the solubility of the food in the digestive juices, and the volume and composition of these digestive juices Intimately intermingled with these factors of food and secretory activity is the influence of aerobic and anaerobic conditions in the digestive tract on the nature of the bacterial activities that occur there The initiation of putrefactive decomposition in the digestive tract, as elsewhere depends very largely, though probably not exclusively on the activities of obligate anaerobes An important portion of the digestive tract is most of the time under anaerobic conditions

The facts all point to the correctness of the view that we largely owe the initiation of bacterial proteid cleavage there to the agency of the strict anaerobes, but it does not follow that intestinal putrefaction is carried on through the sole activity of these [illegible] The intestine abounds with micro- [illegible] able to attack albumoses and p[illegible] further

* Abstract of the Harvey Society Lecture delivered at the New York Academy of Medicine Nov 3 1906.

degradation of the proteid molecule, thus entering into a symbiotic action with the strict anaerobes

The symbiosis of aerobes and anaerobes is a biologic phenomenon of much consequence in determining the distribution of anaerobic bacterial processes in the digestive tract Without such symbiotic action, the development of strict anaerobes would be confined to those parts of the digestive tract into which oxygen passes rarely, and then only in small amounts The large intestine is seldom visited by free oxygen, but it is probably usual in man for the small intestine to contain a little air

It is probably safe to assume that in the mouth the free presence of oxygen constantly acts as a deterrent to anaerobic growth In spite of this, however, anaerobic life is possible Caries of the teeth, which was formerly referred to aerobic bacteria, seems clearly the result of the invasive action of anaërobes on the tooth pulp In removing decomposing food masses by the intelligent use of a tooth brush, one not merely admits air to the anaerobes, but also removes many aerobes, which, through the symbiotic action already mentioned, facilitate the multiplication of the former

In a stomach which secretes little or no hydrochloric acid and which is sluggish in emptying its contents, the chances for anaerobic development are good, and hence we frequently find under these circumstances that there are evidences of putrefactive decomposition of food that has been unduly retained in the stomach (e g, production of sulphuretted hydrogen, mercaptan, butyric acid, etc) On the whole, however, I think one may say that in the course of chronic gastric affections the number of anaerobic micro-organisms in the stomach is seldom great

Of the conditions of bacterial life in the small intestine, very little is known because of the inaccessibility of the contents of this portion of the digestive tract However, observations at operation after gunshot wounds and at early autopsies have shown that putrefactive micro-organisms are commonly few in the upper two-thirds of the small intestines In man there is in the ileum within a foot or two of the colon a marked increase, both in the number of bacteria and of their varieties Hence we find that the mixed fecal bacteria taken from this level of the lower ileum are capable of inducing putrefactive changes in native proteids and in more simple nitrogen-holding media, even in health, and that anaërobic conditions of bacterial life are exaggerated in pathologic states We may indeed look on the ileum as the debatable land of digestive territory

In the large intestine we find the most dense accumulation of bacteria and the best conditions for anaerobic growth The transition from small to large intestine is in this respect very striking The anaërobic conditions are well maintained throughout the colon and it is here that we find the greatest numbers of anaerobes and the most pronounced evidence of putrefaction There is, however, a gradual fall in the number of living bacteria beyond the ileocecal valve, so that in the rectum the numbers of cultivable bacteria are very much less than in the ascending colon It should be noted, however, that the variety of bacteria in this region is often not so great as in the ileum, although their numbers are in excess

Dr Herter then discussed the characters of the bacterial flora of carnivorous and of herbivorous animals and the reducing action of meat He says that in the case of carnivorous animals living on raw meat there seems little doubt that anaerobic conditions may exist throughout the digestive tract, and that the reducing action of meat in the upper part of the tract may contribute materially to diminish the quantity of oxygen carried into the intestines Meat which has been cooked slightly still possesses considerable reducing power, and it is not unlikely that there are cases of excessive intestinal putrefaction in man which depend on the excessive activity of anaerobes in which the conditions of anaërobiosis are favored by excessive meat eating

Attention was also directed to the influence of the epithelial cells lining the digestive tract Dr Herter thinks that in cases where there is excessive production and absorption of indol (and of other noxious substances) this epithelium acts as a protective agency to the organism as a whole Furthermore, the epithelial cells prevent the passage of bacteria from the lumen of the gut into the body tissue

Evidence is gradually accumulating to show that pathogenic micro-organisms may be present in moderate or even in considerable numbers in the intestinal tract under some conditions without giving rise to clinical manifestations of deranged function To quote Dr Herter

It is likely that in all these cases the pathogenic organisms in question are held in check by other bacteria present in the digestive tract or by the bacteria and the intestinal secretions, so that they are unable to multiply in a significant manner or to gain entry into the cells of the mucous membranes It seems not unreasonable to suppose that this restraint may be overcome by errors in diet, depressed general conditions, or by alterations in the secretions of the digestive tract, and that thus definite infection by the hemiparasitic bacteria that are present becomes possible The considerations just mentioned as applying to these bacteria probably hold equally true of the more saprophytic forms concerned in intestinal putrefaction

A variety of conditions may be presumed so to favor the development of these anaerobes that their products, instead of being formed in such small amounts as to be harmless, begin to exert a detrimental effect on the organism Especially important are influences which alter the character of the secretions in the large intestines or bring there unusually large quantities of partly digested proteid food In certain conditions of the digestive tract an excessive or even a moderate meal of proteid food will precipitate an intoxication or a seizure of vomiting or diarrhea There are cases classed as ptomain poisoning in which the digestive tract rather than the food is responsible for the observed disorders

It is evident that, while at all periods of life the human digestive tract contains numerous micro-organisms, the biologic characters of these organisms are not the same at all ages In this may be found a cause for the different types and decomposition in the digestive tract For instance, in the digestive tract of a nursing infant there is found a relatively simple bacterial flora, which should be a matter of interest to those who wish to obtain an insight into the physiology of digestion The great majority of the bacteria are Gram-positive.

Among these may be mentioned *B bifidus, B acidophilus, B acrogenes capsulatus, B lactis acrogenes,* and *B putrificus* As the result of his study of the distribution of bacteria in the intestine of the nursling from autopsies on babies dying in the first six months of life from causes not closely connected with the digestive tract, Dr Herter presents the following summary

In the normal nursling the mouth contains few bacteria and these are for the most part derived from the skin and the nipple—*Staphylococcus pyogenes aureus* bacilli of the *B coli* group and *B lactis aerogenes* In the stomach also the bacteria are few and the bacterioscopic picture shows usually a few positive or negative diplococci or streptococci, or negative coccobacilli, or positive or negative bacilli suggesting the *B coli* and *B lactis aerogenes* groups The normal bacteria of the greater portion of the small intestine are short Gram-negative bacilli of the colon and *lactis aerogenes* groups, mixed sometimes with a few positive and negative coccal forms In the lower ileum the organisms of the bifidus type appear and at the transition from lower ileum to cecum there is a striking change in the proportions of coli and bifidus types, and the former lose their dominant numerical position The ascendency of the bifidus type increases in the colon to such an extent that in the rectum this type has the appearance of being present in pure culture

The bacterial flora of the intestinal tract of the nursling is thus only moderately numerous as regards variety The bacteria are concentrated in the regions that lie between the lower ileum and the anus the ileocecal junction presenting most organisms capable of being cultivated and the greatest variety The comparatively small number of bacteria found in the small intestine has its explanation partly in the small amount of food that lodges there and partly, perhaps in the bacteriolytic action of the succus entericus, which, though moderate is appreciable Wherever particles of transformed casein are found there will bacteria also be abundant but with the exception of the lower ileum the small intestine does not harbor food-masses to any considerable extent The epithelial cells are said to contain an antitryptic ferment and this passes to some extent into the succus entericus, where it is perhaps capable of exerting a restraining influence on that peptonization of proteid which is the first essential step toward putrefactive decomposition

A satisfactory study of the products of the mixed fecal flora from normal nurslings has not yet been made One fact nevertheless, stands out that on sugar-bouillon containing blood the volatile acid or acids produced give a molecular weight corresponding closely to that for acetic acid The insignificant amounts of the higher volatile fatty acids points to the absence of considerable numbers of anaerobic putrefactive bacteria In harmony with this is our observation that the Welch-Nuttal incubation test with rabbits does not produce the gas liver from putrefactive anaerobes The mixed fecal flora when grown on plain bouillon make indol doubtless owing to the multiplication of colon bacilli

If one makes a comparison of the bacteria of the digestive tract of infants fed on cow's milk with the flora of the digestive tract of breast-fed infants many points of resemblance and also some typical and important differences are found In general, the number of bacterial forms present is greater in the case of the bottle-fed infant than in the breast-fed infant especially when the milk has not been sterilized or pasteurized When sterilized milk is employed the increase in the number of bacteria in the digestive tract is dependent, at least in part, on the presence of anaerobic bacteria or facultative varieties capable of forming spores Dr Herter says that many of the bacterial forms found in the nursling's intestinal tract are also inhabitants of the intestine of bottle-fed infants, although in the case of the latter the organisms of the colon type predominate so that the microscopic picture is Gram-negative instead of Gram-positive

The products of decomposition in the intestinal tract of bottle-fed infants are said to be remarkably small in amount, as is the case in nurslings also The large intestine of a normal bottle-fed infant contains merely a trace of indol or none at all Only a moderate amount of volatile acid is obtained from the distillate of an acidified watery suspension made from any portion of the contents of the intestinal tract, and of this acetic acid forms by far the larger amount This Dr Herter thinks, indicates that such bacterial processes of decomposition as occur within the intestinal tract are of a fermentative rather than a putrefactive nature

After infancy the more varied diet increases the opportunities for the entering of many kinds of bacteria into the digestive tract, and, although individual variations are considerable, Dr Herter describes conditions that are fairly typical for persons in good health and favorable environments He says

The Bacterial Conditions After Infancy—During childhood and adolescence one sees a slow transition from the conditions of infancy to those of adult life *B bifidus,* although present, is much less numerous and other types are more numerous Still the numbers of putrefactive anaerobes are small and putrefactive processes in the intestine are not active This is shown by the presence of only a very small amount of indol and phenol in the feces and, in the urine, by low ethereal sulphates and the absence or small amount of indican and phenol The reaction with dimethylamidobenzaldehyd ($(CH_3)_2N\,C_6H_4\,CHO$) is slight or moderate—often so slight that its existence is questionable During temporary derangements of digestion there may be an increase of the ethereal sulphates or indican, but this is very transitory

Toward adult life great differences exist in the habits of different persons and these are in a degree reflected in the nature of the bacterial processes of the digestive tract In adult life the individual experiences new responsibilities new dangers an enhanced emotional life and often a larger proportion of indoor life and more sedentary habits The dietary is apt to undergo an alteration in the direction of increased and frequently injudicious liberty and the use of tea and coffee Also the use of tobacco and alcoholic drinks is either increased or begun Sooner or later these things lead to slight derangements of digestion which manifest themselves clinically One occasionally meets with persons of unusually robust physical and mental health in whom the bacterial conditions of adolescence persist until the fiftieth year, or longer A large proportion of persons,

however, by the time they reach the age of 50 present different physical conditions, although they are in no sense in a state of invalidism, but work hard and most of the time feel well While in such persons the fecal flora shows nothing striking, it is usually not difficult to demonstrate that the number of putrefactive anaerobes in the intestine is larger than in healthy adolescents In short, we find in middle life a large number of persons whose health is good or fair, in whom the putrefactive processes are distinctly more active than is the case with most younger persons of normal health

These persons, though in good health, are not robust A period of sustained hard work is followed by considerable mental and physical fatigue Dining out and the use of alcoholic drinks are indulgences quickly followed by unpleasant consequences Exercise out of doors becomes more and more a necessity The individual is conscious that it requires careful living to keep him in a condition compatible with the performance of his duties

The main difference between the putrefactive conditions found at 50 and at 70 is that at the latter period they are a little more marked in their intensity and affect a much larger proportion of the population The subjects in question at this later period of life are not ill, but in order to keep fairly well have to be very careful as to their habits of living They are moderately anemic and easily develop slight disorders of digestion They weigh less than formerly and, though they may still be well nourished in appearance, are conscious of losing strength from year to year They are undergoing what is usually regarded as normal involution It may be confidently asserted that the onset of senility may be distinctly accelerated through the development of intestinal infection in which the putrefactive anaerobes are prominently represented I have observed this in cases where it has appeared certain that other toxic causes of premature senility could be excluded

The methods of investigation employed by Dr Herter in the pursuit of knowledge in connection with this subject are described at length They relate in part to the study of the morphologic and cultural characteristics of the bacteria found in the digestive tract under different conditions, but in the main they deal with the products of the life activities of these bacteria when grown on different culture medium Dr Herter discusses the study of a microscopic field with the aid of the Gram stain, the isolation and identification of individual bacteria by means of plate cultures, the study of anaerobiosis by means of cultures and by animal experiments, the study of gas production, and such other procedures as are commonly carried out in the identification of bacteria To quote Dr Herter

The appearance of the Gram-stained flora gives, as a rule, but not always, an indication of the dominant flora in the lower part of the intestine. One can not rely on it alone, but in connection with data derived from other methods it helps us to form a conception of the bacterial types present In addition to the study of the mixed fecal flora in the fermentation tubes, as a routine procedure, four flasks, each containing about 500 c.c of medium, have been inoculated with a suspension of the mixed fecal flora and incubated seven days The media employed have been peptone-bouillon, peptone-bouillon with calcium carbonate, sugar-bouillon and sugar-bouillon with calcium carbonate Under the conditions prevailing in these flasks a large part of the growth has been anaerobic and a high degree of anaerobiosis has been maintained, owing in part to the formation of reducing products, such as hydrogen, incidental to the fermentative and putrefactive cleavages It has been found in general that the anaerobes grow more abundantly in the flasks which were kept neutral by the presence of calcium carbonate The chemical examination of the seven days' flasks has included two different series of procedures The peptone-bouillon flasks were examined for hydrogen sulphid, methyl mercaptan, volatile fatty acids, ammonia, indol, skatol, phenol, alcohol and acetone Quantitative determinations have regularly been made in the case of the volatile fatty acids, ammonia, indol, skatol and phenol In the sugar-bouillon flasks the contents have been examined for alcohol and acetone, volatile fatty acids and the non-volatile organic acids The molecular weights of the barium salts of the volatile fatty acids have regularly been determined An interesting observation has been made that in the flasks containing calcium carbonate the molecular weights obtained for the volatile fatty acids have nearly always been somewhat higher than in the case of the molecular weights obtained from the volatile fatty acids of the sugar-bouillon flasks This fact confirms the evidence of the microscopic fields and shows the greater abundance of the putrefactive anaerobes in the neutral flasks than in the sugar-containing flasks that are allowed to become acid Methyl mercaptan has been determined by the isatin-sulphuric acid method I have published previously the method used for the determination of indol and skatol and their separation by means of β-naphthaquinone-sodium-monosulphonate and the dimethylamidobenzaldehyd reaction The chemical methods of studying the feces and urine are those that are fully described in the text-books relating to these subjects To these known methods has been added the color reaction of the filtered watery extract of the feces with Ehrlich's aldehyd and also the urinary reaction with this reagent

The chemical products of intestinal fermentation and putrefaction, the individual susceptibilities as possible factors in determining clinical types of putrefaction, the types of chronic excessive intestinal putrefaction, and, finally, the therapeutic considerations which arise as the natural result of Dr Herter's very careful study, are discussed by him as follows

THE CHEMICAL PRODUCTS OF INTESTINAL FERMENTATION AND PUTREFACTION

I shall use the word fermentation to designate the decomposition of carbohydrate and fatty substances and the word putrefaction to apply to the cleavages of proteid and allied substances The products of putrefaction include the substances containing sulphur or nitrogen or both sulphur and nitrogen The fermentative and putrefactive processes overlap in the sense that they furnish some products in common, such as carbon dioxid and volatile fatty acids, and, furthermore, they are linked by the fact that excessive fermentation in the digestive tract nearly always leads to excessive putrefaction Of the products of fermentation the carbon dioxid acts mainly as a cause of flatulence in the stomach or small intestine. The acids formed—chiefly acetic and lactic—are irritants and may be exciters of vomiting and diarrhea When in excess the acids may be excreted, unburned, and thus withdraw alkali from the tissues.

It is possible that a mild degree of acidosis may thus result from fermentative processes in the intestine

It is now well established that various molds and bacteria are capable of acting on media containing sugar in such a manner as to give rise to the production of oxalic acid Dr Helen Baldwin has shown that by prolonged feeding of dogs with large amounts of sugar a mucous gastritis is incited and that oxalic acid is present in the stomach and urine It was also found that in media containing beef extract and sugar, oxalic acid was produced after inoculations with the contents of the stomachs of persons showing marked grades of oxaluria Although gastric fermentation is not the chief source of oxalic acid in the body, it is possible that it may have an influence in causing the condition known as oxaluria

When we turn to the consideration of the nitrogen-holding and sulphur-holding products of putrefactive cleavage, the scantiness of our knowledge comes into view with almost discouraging clearness That putrefactive processes are attended by the formation of bases such as ammonia, amines, diamines (such as putrescin and cadaverin), cholin, neurin, sulphur compounds and various aromatic bodies, has been known many years and something has been learned though by no means enough, about the media and the bacteria which determine the presence and proportions of these substances When, however, we ask ourselves what we can safely say of the conditions under which such substances arise in the human intestines and of their pathologic effects, we are able to give in most instances only very inadequate answers

Basic Substances—Although ammonia is regularly formed in the course of putrefaction in the intestines, it is probably present in too small quantities to be toxic The organism is well adapted to care for moderate quantities of ammonia which, as is well known, is united with carbon dioxid in the liver and elsewhere to form urea It is possible, however, that ammonium butyrate may act as a local irritant in the intestine Likewise we know nothing of any toxic action from methylamine or other alkyl amines Cholin and, perhaps neurin have been found in the intestinal tract in experiments on animals, but we lack positive evidence that they can under these conditions exercise their poisonous effects on the organism

Putrescin and Cadaverin—Although the study of the conditions under which putrescin and cadaverin are formed in the intestinal tract is of much biologic interest, there is at present little evidence that these diamines are ever formed in sufficient quantities in the human intestine to constitute in themselves factors in the production of states of intoxication The association with cystinuria is a striking fact and the further investigation of this condition will doubtless give us the explanation of the relationship between the production of diamines and the formation of cystin, if, indeed there be any necessary relation

Sulphur Compounds—The sulphur compounds resulting from putrefactive decomposition in the intestines have received little attention from the standpoint of their pharmacologic action It is very difficult at present to form a just estimate of their importance in intestinal intoxications

There is reason for thinking that the production of hydrogen sulphid in the digestive tract is of more importance to the organism than the formation of mercaptan This gas is regularly formed in the intestines and its presence can be demonstrated in freshly voided feces The mixed fecal flora, both in health and disease, produce hydrogen sulphid in cultures containing partially hydrolyzed proteids (bouillon) In health probably hydrogen sulphid is formed only in the colon and perhaps in the lower part of the ileum There are, however, pathologic conditions in which it occurs in the stomach It is not necessary to assume the presence of a pathogenic organism in these cases as it is well known that *B lactis aerogenes* and colon bacilli liberate it when growing in certain media In marantic children I have found organisms capable of producing hydrogen sulphid in pepton-bouillon in the stomach and the first part of the small intestine, while in children dying of bronchopneumonia, such results were obtained only from the flora of the lower ileum and colon

We have at present very little satisfactory knowledge of the influence of hydrogen sulphid on the organism in cases where the gas is liberated in the intestine Senator and others have described poisoning by this gas Among the symptoms which have been met with in such cases there have been prominent those pointing to disordered function of the central nervous system, including headache, dizziness, delirium, mental depression, drowsiness stupor and collapse Somewhat similar manifestations have been observed in experimental poisoning by hydrogen sulphid in animals and men

AROMATIC PRODUCTS OF PUTREFACTIVE DECOMPOSITION

Phenol and Cresol—In some pathologic conditions attended by excessive putrefaction in the intestine these substances are found in the intestinal contents in amounts considerably above the normal amount, which is always small But one never, however finds them in large quantities—never so much, for example, as in the case of indol Notwithstanding this, the quantity excreted in twenty-four hours in the urine as phenol potassium sulphate may be fairly high owing to the fact that phenols are produced in the organism in the course of the metabolism of normal cells In certain putrefactive cases I have found these substances in considerably greater amounts in the urine, but even here however, it does not appear that the phenols can be regarded as important toxic agents, although it is likely that the continued absorption of moderate quantities from the intestine over a long period of time may harm the cells of the liver and other structures concerned with the pairing of phenol and sulphuric acid especially if the cell protoplasm of the liver has previously been somewhat damaged

Skatol—This substance is formed in very small quantities from time to time in some normal persons and very abundantly in some persons suffering from excessive intestinal putrefaction In persons with marked intestinal or nervous disorders I have occasionally found in the feces as much as 8 or 10 mg of skatol in 100 gm of feces Usually the amount is much less than that of indol but this rule is not invariable Like indol it is derived from tryptophan but what are the conditions, bacterial and other, that determine its formation rather than the formation of indol, we do not at present know I have found that the administration of skatol to monkeys by the mouth and by subcutaneous injections has been followed by the appearance of a substance in the urine giving the Ehrlich dimethylamidobenzaldehyd reaction and that the [illegible] to man has heighten [illegible] In most cases in skatol the urine

aldehyd Skatol behaves in the organism much like indol as respects its toxic properties, but it is somewhat less poisonous There is seldom reason to attribute to it any definite pathologic effects It is possible, however, that, like phenol, it may, under some conditions, play an auxiliary part with other substances in damaging living cells

Indol—Indol is not a product of tryptic digestion of proteids and probably can not be formed in the course of physiologic processes without the intervention of organized ferments such as bacteria The indol produced in the intestine is, like skatol derived from tryptophan In early life the production of indol in the intestines is in general very slight and there are some older persons also who, even while suffering from disorders of digestion, do not form indol On the other hand, the production of considerable quantities of indol in the large intestine is a feature of many instances of intestinal putrefaction and in some cases the quantity formed is large That indol may be absorbed in considerable amounts is shown by the appearance of large quantities of indican in the urine of persons in whom the intestine contains large amounts of indol

While it is true that in general the aromatic compounds are resistent to oxidation, it is probable that whenever indol is introduced in moderate quantities into the organism of carnivorous and omniverous animals, a portion of it is burned completely in the body It may be regarded as settled that the liver, muscles, intestinal epithelium and other cells normally exert a protective action to the nervous system in screening it from the effects of an injurious percentage of indol in the blood, by the ability of these structures to quickly bind any indol which comes to them The differences in the observed toxic effects are probably dependent on inequalities in different persons in their ability to oxidize indol and to pair it with sulphuric acid As to the effects of absorbed indol on the organism in disease, it is necessary to speak with caution, since there is no evidence that indol is the only toxic substance absorbed in those cases where it enters the organism from the gut

The idea that the circulation of free indol in the blood may act in a depressing manner on the muscular structures is suggested by the rapid muscular fatigue which comes on in some persons who have suffered for a long period of time from a high grade of indicanuria In some cases of excessive intestinal putrefaction in childhood associated with retardation in growth and abdominal distension there is clearly a poisoning of the muscular system These children show signs of fatigue very rapidly and in some cases where the condition has come on in early life they are slow in learning to walk Their urine contains not only a large amount of indican, but a considerable quantity of phenol It is likely that phenol in these cases plays a part in the muscular depression Perhaps in some instances it is as much a factor in inducing fatigue as is indol

INDIVIDUAL SUSCEPTIBILITIES AS POSSIBLE FACTORS IN DETERMINING CLINICAL TYPES

Instances are many in which clinical experience has made it clear that two persons of approximately the same weight react differently to the same drug and do so regularly Of individual human susceptibilities and reactions to the action of enterogenous poisons almost nothing is now known Nevertheless, one can not fail to recognize the possibility that such individual susceptibilities and reactions may play an important part in determining the clinical manifestations of intoxications It is well known to clinicians that there are some persons who promptly develop a widespread urticaria after indulgence in certain foods or drinks, such as shell-fish or strawberries or champagne In some persons the indulgence in a single glass of champagne is followed within twenty-four hours by manifestations of gout In others champagne causes headache and the excretion of increased amounts of uric acid

The explanation of these different effects is to be sought in the individual cellular reaction of the patient rather than in the poison There are probably many similar examples of individual susceptibility, but when we come to study the question in relation to processes found in the digestive tract we can not make close comparisons between different persons because we can not say what substances are being absorbed We may know that a certain group of patients are alike in having intense indicanuria, but we can not say that the intoxications may not be different in these cases owing to differences with respect to the absorption of other substances than indol Among half a dozen persons suffering from extreme indicanuria one suffers from headache, sometimes migraine-like, another is prone to lumbago, another perhaps has epileptic seizures, another has mental depression, another progressive muscular atrophy, and still another suffers from cyclic vomiting There is good reason for suspecting that very similar bacterial processes in the digestive tract lead in one case mainly to digestive disturbances and in others, owing to a lesser sensitiveness in the digestive tract itself, to better absorption of poisons and the development of more remote consequences, such as acute arthritis, anemia or nervous disorders While it is possible that these very different manifestations are always connected with different and perhaps specifically different types of gastroenteric infection and intoxication, the possibility is not excluded that even such very different derangements may have much in common in their etiology That the mental and emotional peculiarities of individuals have a large part in fixing the type of nervous reactions that occur in consequence of intoxications has become apparent to careful students of pathologic conditions

TYPES OF CHRONIC EXCESSIVE INTESTINAL PUTREFACTION

The variations in the clinical manifestations and pathologic accompaniments of chronic excessive intestinal putrefaction suggest that the etiologic conditions vary in different patients The three types that I would suggest are

1 The *Indolic Type* of chronic excessive intestinal putrefaction This is marked by striking indicanuria and probably is due to members of the *B coli* group

2 The *Saccharo-Butyric Type* of chronic excessive intestinal putrefaction, which seems to be initiated chiefly by the anaerobic forms In its simplest examples there is very little indol in the gut

3 A *Combined Type*, or cases combining the characteristics of Groups 1 and 2

Indolic Type of Chronic Excessive Intestinal Putrefaction—In these cases the members of the *B coli* group form indol in considerable quanties and they probably invade the small intestine in large numbers The bacterial cleavages seem largely to replace normal tryptic digestion

Provisionally we may classify here that type of chronic intestinal indigestion found in marantic chil-

dren with large abdomens In the treatment of these children much patience is necessary At first their digestive processes must be improved Carbohydrates should be greatly restricted and should be given as rice or Huntley and Palmer biscuits The milk may be peptonized to promote its earlier absorption Chicken, beef and mutton are permissible, but they should be finely divided In a child 5 or 6 years old it may be advisable to give only two meals a day Considerable benefit seems to follow daily irrigation of the colon, which facilitates the removal of the putrefactive products before they are absorbed The children should exercise, but should be spared fatigue They should rest much Because they stand cold badly, they do best in a mild climate during the winter Improvement may be possible after several years of rigid régime The retarded growth, however, is evident even at puberty Some of these patients seem always susceptible to intestinal disorders, and may never become strikingly robust.

The Saccharo-Butyric Type of Chronic Excessive Intestinal Putrefaction —In this type the seat of the putrefactive process is the large intestine and lower ileum It is due to the activity of the strictly anaerobic butyric acid producing bacteria Although our study is not yet exhausted it may confidently be stated that in many cases *B aerogenes capsulatus* is largely responsible With this form may be associated *B putrificus* and possibly sometimes the bacillus of malignant edema, although often these forms are not found in cultures on any of the ordinary media

The abundance of putrefactive anaerobes, especially of *B aerogenes capsulatus,* gives a peculiar character to the intestinal contents The organisms attack carbohydrates and proteids vigorously and butyric acid is formed from both, together at times with propionic, caproic or valeric acid These acids are largely responsible for the odor of the stools From proteids, besides these acids, hydrogen, carbon dioxid and perhaps methane are formed As a consequence the feces have a low specific gravity and often a decidedly light color The presence of hydrogen leads to the extensive reduction of bilirubin and other pigments The Schmidt test with mercury bichlorid gives a strong pink color The stools have an acid reaction, although the acids are neutralized in part by ammonia and other bases formed in the process of putrefaction It is probable that the ammonium butyrate acts as an irritant to the gut, causing soft stools or diarrhea Indol is absent or present in small amounts Phenol occasionally is found in slight excess In the urine the ethereal sulphates at times are excessive although the reason for this is not clear Mercaptan may be present in the feces as a trace, it also is found in cultures by means of the isatin-sulphuric-acid test. It has been noted that as the patient improves the mercaptan becomes less or disappears, but the explanation of this phenomenon is at present unknown

In nearly all adults the *B aerogenes capsulatus* is present in the intestines in small numbers It is possible that this organism is responsible for repeated slight attacks of intestinal putrefaction although it may not in these mild cases lessen the duration of life In some persons in whom a high grade of putrefaction is present a condition of actual invalidism may be induced and life may be definitely shortened as a consequence of the intoxication

The presence of ammonium butyrate may give rise to irritation of the intestine and this may be associated with an excessive desquamation of the epithelium, not only in the intestine, but in the mouth and stomach as well We have evidence of this in the presence of a large number of nuclei in the feces, and it is well recognized that excessive desquamation of the lingual epithelium is associated with digestive disorders The patients suffer from flatulence They tolerate carbohydrates and acids badly, and are very liable to attacks of diarrhea after a meal of carbohydrates Acids may be formed in the mouths of these patients through the influence of anaerobes This adds to the irritability of the intestine It is possible that in advanced cases the *B aerogenes capsulatus* may invade the small intestine and there find sugar from which to form butyric acid, etc. After the carbohydrates are thus exhausted, the anaerobic forms in the large intestine set up putrefactive processes in the proteids which exist there

It is also noteworthy that many patients who suffer from severe intestinal putrefaction are distinctly anemic The first change in the blood seems to be a decrease in its volume, then the hemoglobin falls somewhat and finally the cells themselves are reduced in number The grade of anemia varies extremely, from a moderate secondary anemia to the most serious grades of the progressive pernicious form

The Combined Indolic and Saccharo-Butyric Type of Chronic Excessive Intestinal Putrefaction —Examples of this type of intestinal putrefaction are common There are many putrefactive anaerobes in the gut and also a persistent and well-marked indicanuria, which is but slightly influenced by diet The nervous symptoms are relatively prominent and appear early They are emotional irritability and periods of mental depression, muscular or mental activity soon induces a striking fatigue Later the blood disturbances may appear Although these patients have intervals of improvement that continue for months, on the whole the general tendency is downward They become less robust and recuperate less promptly from every succeeding attack They may run along for ten or fifteen years in a weak condition, with periods of slow improvement, and finally may present the picture of a pernicious anemia In others the nervous symptoms increase and the patients may need treatment in a sanitarium or in an asylum for the victims of melancholia

These various manifestations in different individuals may represent merely a differing reaction to the same poison Whether the nervous system or the blood shall bear the brunt of the attack is determined by the relative vulnerability of these tissues in that particular individual It is noticed also that under treatment one group of symptoms may improve quite independently of the other

There is a more rapid advance of invalidism than in the case of either type (1) or type (2) alone The atrophy of the fat and muscle and the blood changes are present and perhaps also there are chronic parenchymatous changes in the kidney and liver as a result of the constant poisonous action

THERAPEUTIC CONSIDERATIONS

The difficulties that beset our efforts to control and modify excessive intestinal putrefaction are obvious Although the cases arrange themselves in groups each one presents certain points of difference Our experience is so incomplete that as yet our efforts are more or less experimental Notwithstanding this, one can lay down rules for partial guidance that rest on principles but a careful regard for individual imperative

The mild cases often show a rapid improvement and lose the evidences of putrefaction The patient feels well yet he can hardly be called normal, because he has deficient reserve power and will easily relapse to his former condition after an indiscretion in eating or excessive fatigue or worry The long-standing cases improve slowly at best The chemical products of putrefaction may be reduced in amount, but the symptoms often persist, and even under most favorable circumstances the patient is liable to frequent and protracted exacerbations

The following principles must be regarded in treating all the three types of putrefaction (1) Avoidance of continued reinfection that follows the ingestion of putrefactive bacteria with the food, (2) the promotion of prompt digestion and rapid absorption from the small intestine (3) the reduction of the number of putrefactive anaerobes in the ileum and colon

1 To avoid infection and reinfection the mouth must receive scrupulous care Carious teeth and gingivitis must be treated carefully by the intelligent use of the tooth brush and of washes containing peroxid of hydrogen In conditions of gastric atony a process of putrefaction begins in the stomach that normally starts in the colon Gastric fermentation and putrefaction are controlled by lavage every day, perhaps best in the morning The reduction of the number of bacteria here leads to lessened damage to the bowel at lower levels

In the preparation of food ordinary cleanliness is very effective It is probably better to use cooked food as much as possible Fruit is not above suspicion, for Dr Rettger has determined that the bacillus of malignant edema is commonly present on banana peel This suggests the advisability of peeling all fruit that is eaten Milk always contains a large number of bacteria and often some of the putrefactive forms, especially *B putrificus* The lactic acid formers abound, but their action is rather beneficial in that they antagonize other and harmful forms Sterilization of the milk is of little value Pasteurization or the ordinary boiling kills the lactic acid formers, but does not harm the spores of the putrefactive organisms Cheese, except fresh home-made cheese, contains many putrefactive forms, and is best avoided, particularly inasmuch as many of these patients lack the protective action of the normal amount of hydrochloric acid in the stomach.

2 With rapid digestion and prompt absorption little pabulum for the putrefactive organisms reaches the colon These processes are facilitated by measures that improve the secretory and motor functions of the stomach Chief among these is proper mastication, which largely determines the ability of the body to utilize food When large masses of meat are swallowed they commonly appear in the feces Comminution of food outside the body is not an adequate substitute, for the patient then loses the emotional stimulus to gastric secretion and also the digestive action of the saliva itself The administration of hydrochloric acid often helps for a time, but in long-standing cases, especially those of the combined indolic and saccharo-butyric types it is of little use Ferments such as pepsin and pancreatin are of doubtful value although they can not be said to be always useless Diastase gives better results, as it enables the patient to utilize more extensively the carbohydrates of the food If as often happens the stomach is irritable, it is advisable to give small meals and to administer flaxseed or other demulcent before eating The best pancreatic stimuli, aside from the quality of the chyme, are cheerful emotional accompaniments of eating, and rest, physical, mental and sexual Prompt absorption is promoted by restricting the amount of food, especially of proteid food. Meat should rarely be eaten more than once a day

3 To reduce the number of putrefactive organisms in the colon, one turns naturally to intestinal antiseptics While these drugs may act efficiently on bacteria in the stomach, evidence of their continued action in the intestine is variable Perhaps the salicylates are most likely to check fermentation and putrefaction in the stomach and small intestine It is conceivable that certain oxidizing substances which are slowly dissociated, such as manganese bioxid, may reach the colon in time to liberate their oxygen there and thus, in part at least, remove the anaerobic conditions that obtain in this part of the intestine

The use of laxatives may be followed by temporary benefit, in that they lessen absorption from the gut, as is shown by a decrease of the ethereal sulphates in the urine, after their use They must, however, be given with caution, lest they increase the irritability of the bowel and lead to diarrhea and loss of strength On the whole, they are useful in acute and subacute cases only

There are certain very tempting methods which aim to substitute harmless bacteria for the putrefactive organisms, but more evidence is needed as to the value of this procedure It is a common practice to introduce lactic acid formers in kumys and kefir and also in bacilac, a fermented milk introduced by Metchnikoff, which is free from yeasts Irrigation of the colon two or three times a week is often followed by a decrease of the ethereal sulphates in the urine and by relief from symptoms, including both the mental symptoms and the anemia This procedure is more efficacious in the saccharo-butyric and combined types of putfefaction

PROGNOSIS

In considering the prognosis in these patients, the duration of the condition is as important as its intensity Better results are obtained in those cases induced by gross errors of life, the correction of which is followed by improvement or complete recovery In a highly neurotic person the outlook is less hopeful A protracted rest for two or three years, with careful attention to the principles of treatment laid down, offers the best hope of health

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THE RELATION OF DISEASE OF THE NASAL ACCESSORY SINUSES TO DISEASE OF THE EYES *

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That the nose and its pathology have a direct influence on the health and function of the eyes has long been admitted, and the more obvious and striking forms of interdependent diseases have for a long period been recognized and treated.

It is unnecessary to mention the ordinary examples of associated disease I wish to call your attention to a practically unrecognized condition The symptoms of this condition are purely ocular The patient never has a reason to suspect a nasal origin, and, as use of the eyes almost invariably increases the headache of this condition, he consults an oculist for relief. Another

* Read in the Section on Ophthalmology of the American Medical Association at the Fifty seventh Annual Session, June 1906

reason for believing that the eyes are at fault is that correct glasses relieve for a time all or the greater part of the symptoms This may be explained by the lessened congestion of the ciliary body resulting from a relief of eyestrain, however small in amount And, as congestion is the basis of this condition, even a slight reduction of its total amount will, for a time, give relief from the more prominent eye symptoms

The first point which attracted my attention to the possibility of involvement of the neighboring sinuses was that this particular class of headaches was usually unilateral, or, if bilateral, the pain was greater about one or the other eye The nose, however, shows no distinct anatomic or pathologic condition to account for the one-sided headache, except on very close examination with suprarenalin and cocain, when the middle turbinal will be seen to be closely applied in its anterior third to the lateral nasal wall, or even may be found sufficiently boggy or hypertrophied to resist shrinkage by these agents The literature, especially the German, furnishes abundant evidence of the close relation existing between these sinuses and the orbital contents These cases, however, are all of the suppurative type of sinuitis, and a nasal examination reveals evidence of pus in one or more of the locations characteristic of sinus infection, while in the class of cases here presented no pus could be detected in the nose at any time except in a few cases which showed mucopus after probing and irrigating the frontal sinus

The frontal sinus and the ethmoid cells opening into the infundibulum are the sinuses chiefly involved Pihl[1] reports a case of retrobulbar neuritis from chronic antrum suppuration, but here again the presence of pus coming from the antrum should be easily demonstrated, and it is almost impossible for the nonsuppurative condition here described to occur in the antrum of Highmore, because, from its position at the lower end of the hiatus semilunaris the ostium is never blocked by a congested middle turbinal or, if blocked at all, it is often reopened by the varying turgescence of the turbinal

The clinical picture presented in this condition is as follows The origin of the trouble dates back to an attack of so-called grippe or to a very severe cold. The patient has had headaches more or less severe and always unilateral when they first appear, although often they become general after an hour or more The patient usually speaks of having neuralgia The pain occurs during sleep as well as in the daytime, frequently beginning and ending with some regularity at a given hour each day During the existence of the pain there is often unilateral lachrymation, swelling of upper eyelid and tenderness on pressure at the inner orbital angle or over the anterior wall and floor of the frontal sinus as compared with pressure applied to the same areas on the opposite side The patient experiences intervals of complete relief, during which the eyes may be used for near work indefinitely During attacks however, use of the eyes is almost impossible, as it intensifies the symptoms markedly and may even be accompanied by blurring and mixing of print Insufficiency of both accommodation and convergence is usually observed and there may be a reduction of distant vision

On stooping over to pick up an article from the floor the patient experiences marked increase in pain and often becomes dizzy on resuming the erect position While stooping he is usually able to put his finger on the area of greatest pain and describes the sensation as one of increasing pressure as though the painful area was being pushed slowly forward by a force from behind The circulatory disturbances of the menstrual period aggravate the condition and each cold brings it on Jarring, as in riding on a train, is almost unbearable during an attack. The patient's ability to think clearly is disturbed The pain is only partially controllable by opiates Excess in eating or drinking alcoholic beverages aggravates or even may bring on attacks

As a rule, no history of nasal disease is obtainable In fact, patients often object to a nasal examination as a waste of time and a useless procedure, being perfectly sure that the trouble is entirely in the eyes Close examination will reveal a swollen boggy turbinal or one which is anatomically so close to the lateral nasal wall as to press on the hiatus semilunaris and thus interfere with free interchange of air and free exit of normal secretions from the frontal and anterior ethmoidal cells

If a patient gives a history of having experienced any of the above symptoms he should be seen during an attack and an attempt made to relieve the acute symptoms with suprarenalin and cocain applied about the middle turbinal and into the infundibulum If an attack can be relieved thus, the hypertrophied anterior end of the middle turbinal should be resected to give free access to the infundibulum and hiatus semilunaris

The etiology of this condition depends on the anatomic relation of the middle turbinal to the hiatus semilunaris and the infundibulum The air in the frontal and anterior ethmoidal cells is imprisoned there by pressure of the middle turbinal against the lateral nasal wall, the turgescent tissues filling in the hiatus semilunaris and effectually blocking it The lining mucous membrane of the sinuses absorbs the oxygen in the imprisoned air and thus creates a vacuum This absorption results in negative pressure and consequent swelling of the lining membrane with increased blood supply to this region Stasis, to a greater or less degree, results and may be shown by swelling of the upper eyelid Pressure of the congested tissues on the contained nerve endings together with this stasis, produces the symptoms and results in reflex vasomotor disturbances in the circulation of the neighboring structures Robertson[2] advances a similar theory Ewing and Sluder[3] described a similar condition which Sluder ascribed to an abnormal approximation of the uncinate process of the ethmoid to the bulla of the ethmoid

I have also seen the specimen in Hajek's collection, to which Sluder refers and it is easy to understand how such a narrowing of the hiatus might cause this condition by turgescence of its own lining membrane This must be rare, however, as compared with a pathologic turbinal which possesses infinitely greater possibilities for alternate shrinking and swelling owing to its venous sinuses Sluder and Ewing offer no explanation of the condition, being satisfied with the statement that there is an intrasinus change of air pressure The long-recognized otalgia in acute otitis media is analogous in its etiology to this sinus condition It seems improbable that sufficient stasis could occur throughout the orbital circulation to bring about such severe symptoms by itself alone The exit of blood from the orbital structures is well provided for by the superior and inferior ophthalmic veins and their communicating branches emptying backward into the cavernous sinus and the ophthalmo facial vein emptying forward into the facial

1 Pihl Klin Monats. f. Augenh., July 1905

2 Robertson THE JOURNAL A. M. A.
3 Ewing and Sluder Trans. Amer

vein The ophthalmo-facial vein anastomoses with the above ophthalmic veins, and in case of need the main venous current may flow into the deep veins of the face instead of, as usual, into the cavernous sinus

This suggests the probability of a further influence which, I think, is to be found in the disturbances of vasomotor control secondary to the irritation of the branches of the fifth nerve lying in the lining membrane of these sinuses That no direct circulation of infectious material occurs in the orbital vessels is shown by the subsidence of all symptoms in a few minutes in typical cases when purulency of the infundibulum is restored On the other hand, the arterial supply to these sinuses comes from the ophthalmic artery and the stasis within the sinuses must cause back pressure in the orbital branches of this artery

Pus or mucopus may or may not be found and when present indicates only that the mucous transuded from the swollen membrane has become infected from the nose In fact, it is not impossible to imagine that a great many cases of suppurative sinuitis have their origin in a frequently recurring condition such as is here described The essence of the whole matter is that there is interference with the free interchange of air between the nasal chamber and the accessory sinuses

In going over the literature of sinus disease I found nothing in reference to the particular type of disease here described Ziem[4] found disease of the uveal tract to be a frequent result of chronic nasal disease either directly from an accessory sinus by way of the veins and lymphatics or indirectly through the general circulation Recurring cyclitis and choroiditis and even glaucoma in the early stages are favorably influenced by treatment of the accessory sinus infection Senile cataract he found to be always accompanied by chronic pus discharge from the nose, and in those cases where the cataract was not mature he obtained increased vision by treatment of the nasal condition, although the lens opacity was unaffected In empyema of the antrum of Highmore, Ziem[4] frequently found contraction of the visual field This observation has been confirmed by Berger and by Kuhnt, not only in involvement of the maxillary sinus, but also of the frontal and other accessory sinuses The fields showed no typical picture, as in one case the field for white would be contracted and that for colors only slightly affected and *vice versa* In a few cases, in addition to the concentric contraction a further segment-like contraction was observed in that portion of the field corresponding to the location of the sinus involved

Grünwald Engelmann and M Schmidt found no contraction of the visual fields

Kuhnt saw several cases in which one or both nostrils were completely closed so that not even by the greatest effort could air pass through them and there existed no trace of lowered vision, contracted fields, muscular or accommodative asthenopia

Ziem[4] considers that the functional disturbances of the eyes are due to a passive congestion of the orbit and of the choroid and ciliary body

Hajek has observed asthenopic symptoms in cases in which the ethmoid cells were involved, as well as in many cases of frontal and maxillary sinus involvement Grunwald believes that all tissues in the neighborhood of the infected sinus are in an inflammatory condition which is exaggerated by any strain or effort which increases the blood flow to the part, such as an accommodative effort which brings on a sensation of discomfort This discomfort is relieved by an unconscious relaxation of the accommodation, and the patient experiences a blurring and haziness of the object looked at This Grunwald terms psychic asthenopia

Berger, Knies and Zarniko[5] believe the ocular symptoms to be reflex in nature from the sensory nerve ending of the nasal mucosa

Zarniko[5] holds that to make Ziem's theory of passive congestion tenable the venous channels of the orbit must be relatively small and narrow I am inclined to agree with Zarniko in this particular, as the reverse is true, the exit of venous blood from the orbit being particularly well provided for in all directions, both backward in the cavernous sinus through the superior and inferior ophthalmic veins and into the deep veins of the face through the ophthalmo-facial which connects with the inferior ophthalmic vein The main vein the superior ophthalmic, has no valves except where tributary veins enter, and so its blood may flow in either direction, into the cavernous sinus or through the communicating vein into the inferior ophthalmic and so into the deep veins of the face

Eversbusch has observed that in sympathetic ophthalmia there is often marked swelling in the nose on the side first affected and that it remains unilateral until the later stages of the process He now considers this to be an important symptom preceding the prodromal symptoms of involvement of the healthy eye, and has the nose examined in each case where sympathetic ophthalmia might be expected, in order not to wait too long before enucleating, and also in enucleating the first eye he does not suture the conjunctiva nor use a pressure bandage, as he considers a free flow of blood necessary to remove the toxins which remain in the veins of the orbit and nose

In the exacerbation of iridocyclitis, Eversbusch has many times found an accompanying catarrhal nasal condition or a marked exacerbation of an existing catarrh In a case of severe iridocyclitis, when the patient refused enucleation and all treatment for two months had failed to influence the condition, Eversbusch had a hypertrophied inferior turbinal removed as a last resort There was free bleeding for several hours, with the result that the ciliary injection disappeared almost entirely in both eyes, the vitreous haze cleared and the action of the mydriatics, previously unsatisfactory, became complete This improvement lasted eight or ten days, when a fresh attack both in nose and eyes was relieved by enucleation of the first eye, the second eye healing with full vision

The treatment of this condition is operative Having made the diagnosis, the middle turbinal should be cocainized and a notch made at the point of its anterior insertion into the lateral nasal wall, a Myles punch being used The free end of a wire loop on a Krause snare is now introduced into the notch where it is held firmly while the canula of the snare is pushed along the under surface of the middle turbinal as far as is considered necessary Closing the snare gives a clean-cut, smooth-edged wound which rapidly heals In case the turbinal is not large much useful tissue may be saved by merely

4 Ziem Centralbl f Augenh., 1887 pp 171 258 also Monats. f Ohrenh pp 241 261 271 279 Berlin klin Wochft Nos 27 28 29 Int Anat klin Punschau p 324 Deutsche med Wochft, No 5 Munch. med. Wochft, No 16

5 Zarniko Die Krankheiten der Nase und des Nasenrachens, Berlin.

punching out a portion along its line of insertion, thus uncovering the hiatus As a rule, probing and irrigation are unnecessary and when carried out always leave room for doubt as to the part they play in producing the mucopus occasionally found

HISTORY OF CASES

CASE 1.—Mrs E had pain in left eye in 1892 after "grippe," beginning after rising and continuing until 10 a m, when it gradually became easier and ceased entirely at noon The condition improved during the summer, but each winter during the months of January, February and March she has had similar attacks of variable severity

In February, 1905, she caught cold and pain appeared about left eye, beginning at 9 a m and ending at 2 p m, leaving the eye weak and watery, especially when she tried to read The ocular condition was normal, but there was tenderness on percussion and pressure about left frontal sinus No pus was found in nose, but a large septal spur, which pressed against the middle turbinal and kept it constantly irritated and congested, was removed and astringent applications were made to the turbinal One hour later the pain had disappeared For three weeks there was a mucopus discharge, slight in amount, seen under the middle turbinal, but the restored drainage banished all symptoms

CASE 2.—Mrs C H. H six years ago noticed tiring of eyes after an hour's reading Two or three times weekly she has supraorbital pain, chiefly about right eye. After correction of a compound hypermetropic astigmatism and prism exercises for an exophoria, she ran an unsatisfactory course for a year until last March, when she had a distinct severe neuralgia of right eye and subconjunctival hemorrhage with soreness of globe and lachrymation There was no marked tenderness about the frontal sinus, but she had a watery nasal discharge No pus was found at any time The middle and inferior turbinate bodies were very boggy and were reduced with difficulty Thorough shrinking, however, was sufficient to bring relief at once Local astringent applications entirely cured the condition without any attempt at probing the frontal sinus Later she was without her glasses for four or five days without a symptom

CASE 3.—Mrs S gives a history of unilateral neuralgic pain in left eye and back of head for past three or four years it has been worse lately and now is accompanied by lachrymation and some edema of lids of left eye She thinks she has noticed occasional yellow discharge from nose, on pressure there is tenderness over anterior wall of left frontal sinus and against its floor No pus was found in nose, but the turbinals were boggy Patient could read only twenty minutes when lachrymation would begin, worse in left eye The sinus was probed and irrigated and a small amount of thick pus found, which probably accounted for a bad odor, of which she had occasionally complained The sinus was irrigated several times and the patient experienced immediate relief There was some mucopus flow for about one month, according to the patient, but no return of the symptoms

CASE 4.—W A W four or five years ago had neuralgic pains about left eye Four weeks ago he had grippe with excessive nasal discharge One week later supraorbital pains began about left eye Pain begins at 2 a m and patient has three separate attacks, usually at 2, 5 and 7 a m Boggy turbinates on left side were found but no pus at any time nor local tenderness about sinus He was given a suprarenalin spray for home use and local astringents were used twice in office with complete relief at once There has been no recurrence to date He had been wearing +0 25 cyl, ax 90 for each eye, which as they have given no relief, he has discarded

CASE 5.—M W B gave a history of catarrh for four years accompanied by frontal headache worse about right eye With each eye under homatropin, refraction was +0 50 S ⊃ +0 25 cyl ax 90 No glasses were ordered Marked tearing and blurred vision occurred after a few minutes near work There was some tenderness to pressure about the sinus floor on right side and the right middle and inferior turbinals were swollen and boggy No pus was found and shrinking of the middle turbinal gave no relief Next day the anterior third of this turbinal was resected and the sinus probed Free flow of pus was followed with complete relief of pain in half an hour Irrigation of the sinus was attempted with doubtful results There was a mucopurulent discharge, gradually getting thinner and less in amount for six weeks, since which time there has been none whatever He had been having his eyes examined occasionally for eight years with absolutely no relief, but still thought the eyes were at fault and came to me to have them examined again. He now uses them excessively, as he is a senior medical student There has been no return of symptoms to date

CASE 6.—Mrs L formerly had typical migrain, but attacks have been infrequent for the past three or four years. Two years ago noticed pain in both globes at night and especially in church or theater Atropin continued for two or three weeks seemed to relieve her While in the West she had a severe attack of pain about the left eye. The eye became bloodshot, tears streamed from it and reading was impossible, as it increased the pain Close questioning developed the fact that there was a nasal discharge at the time Later she had a similar attack in the same eye and obtained no relief from atropin At this time she remembers that there was a nasal discharge She has consulted many ophthalmologists of repute, who changed her glasses, exercised her muscles etc, without permanent relief Recently she had two attacks like the above, except that she has not observed any nasal discharge whatever Atropin was useless Some tenderness of left sinus floor was found during an acute attack last May She had been instructed to come in at once if an attack occurred, and she came within half an hour of the onset with the eyelids red and swollen and tears streaming over her cheek Suprarenalin applied to region of middle turbinal entirely relieved the pain in ten minutes The anterior third of left middle turbinate was resected without probing sinus and she has had no recurrence except once recently, when she had a slight return of the pain which was permanently relieved by application of 1 per cent iodin in glycerin to the region of the hiatus She has discarded her glasses

CASE 7.—Mrs E J M five years ago had a severe attack of "grippe," and for several months had photophobia and frontotemporal headaches daily and could not use eyes for near For past three months pain in frontal and temporal region has been almost constant and caused insomnia and extreme nervousness Three weeks ago vision began to fail and headaches continued with soreness in the bony margin of the orbit Right eye first began to fail, followed by same condition in the left eye Stooping increases pain and causes vertigo A cold marked the beginning of present attack, accompanied by occasional thick nasal discharge, greenish in color Pain persists, but discharge is watery now Middle turbinals on both sides were hypertrophied and on the left boggy and edematous No pus was found After shrinking the left middle turbinal a thin colorless mucus was seen in the middle meatus There was extreme tenderness about both frontal sinuses on pressure and percussion L V 20/40 and J 1 R V 20/30 and J 1 Refraction under homatropin in each eye was +1 00 S ⊃ +0 25 cyl, ax 180 which was not ordered

Maddox rod	crossed diplopia, one degree	
Parallax test		exophoria
Red glass	crossed diplopia with instant fusion	

For near there were five degrees of exophoria as shown by the tangent scale Resection of the anterior third of her left middle turbinal and probing of her left frontal sinus relieved the condition in one hour's time and has had no headaches since The right side was similarly treated as tenderness persisted about the frontal sinus No pus was found on the right side, but on irrigation portions of a mucous cast were washed out. A large clot of thick yellow pus was washed from the left frontal sinus on the day following the nasal operation Vision improved by a few letters daily until the fourth day it 20/15 in each eye Nose was still discharging [illegible] but there was no return of symptoms and [illegible] she reported no return

CASE 8.—H W [illegible]
eyes especially the [illegible]
worked indoors by a [illegible]

morning and continues until noon, with inability to use eyes In afternoon he uses his eyes indefinitely without symptoms Has history of nasal catarrh Right nostril was stuffy from swollen, boggy turbinals Shrinking turbinals showed mucopus in middle meatus and dropping into throat from right choana The anterior one third of his right middle turbinate was resected and mucopus flowed from frontal sinus, with complete relief of all pain and ocular symptoms His refraction was an irregular compound hypermetropic astigmatism of low degree, and glasses were not prescribed, as the nasal treatment gave complete relief This case is one of the few in which discharge was actually found and then only on careful shrinking and probing in the middle meatus

CASE 9.—H. L., aged 13 years, had headache and pain in eyes, with blurring of print Her general health was good, except for several indefinite rheumatic attacks Dr Frank Allport prescribed + 0.25 S ⊃ 0.25 cyl, ax 180 for both eyes for reading These glasses gave her so much relief that she wore them constantly For three months patient did well, but began again to have pain in and over eyes The pain about left eye was then, for the first time, worse than the right This suggested a nasal examination and the turbinates of the left nostril were found to be swollen somewhat and to be interfering with breathing The fact was then brought out that with colds she usually had such headache which was increased markedly by stooping over and was followed by dizziness The frontal floors were tender There was some purulent nasal discharge of slight amount indicating the last stages of her acute rhinitis, but examination of the sinuses failed to show any discharge Local astringent treatment cleared the nasal condition and the headache and she now requires glasses only for reading

CASE 10.—Dr M never had headaches until a year ago, although he has worn glasses for twelve years for a mixed astigmatism A year ago he began to have occasional neuralgia of the left supraorbital region, usually coming on about 12 o'clock About three months ago he had a very severe attack, which had lasted with varying severity for a week His nose showed atrophic rhinitis but there remained sufficient of the middle turbinate on the left side to obstruct the infundibulum

His pain was markedly increased on stooping, and this fact first drew my attention to his condition, as during a call on him at his home, I noticed that in hunting for an article in a closet he did not dare bend over on account of the severe pain it caused him and was obliged to call a servant to help him A portion of the left middle turbinate at its anterior insertion was punched away and a probe passed into the frontal sinus, resulting in complete cessation of the headache, with no return to date

In Case 6 of a series reported, Dr Kate Baldwin[6] attributes the relief from headache and inability to use eyes during attacks to relief of intranasal pressure, following a middle turbinectomy, while the case is to me obviously one of obstruction to the outlets of the frontal and ethmoidal sinuses The typical symptoms she gives as follows Marked exophoria, pain since 18 years of age in left temple, eye and teeth, with fullness in left side of nose occurring about 10 a. m., passing away in one or two hours with or without treatment, relief was always accompanied by a small quantity of clear fluid mucus from nose whereas during the attack the nose had been very dry The middle turbinate was so swollen and boggy that cocain was of no avail and chloroform was employed No reflex neuroses, such as sneezing, cough etc., were present as should be expected if the case were one of pure pressure against the septum, while the history taken with the others related in this paper, seems to me to leave no room for doubt as to the real condition

Also in Case 7 the significant symptoms correspond with those given in my cases The patient showed marked exophoria with diplopia at times, pain over left eye and in left temple, swelling of upper lid and pain in eyeball, indistinct vision, improvement of vision and exophoria after middle turbinectomy No doubt the other typical symptoms could have been found if the sinuses had been suspected

In none of my cases have I been able to find any fundus changes as Posey[7] has observed several times I have never seen a case of iritis or uveitis which I could prove to be caused by the accessory sinuses as reported by Fish,[8] but I am constantly on the alert for such cases and have made the examination of the nose and sinuses part of the routine examination of the eyes

The point which I wish especially to emphasize is the absence of all definite nasal symptoms and the apparently normal nose found All symptoms point to the eyes, and the patient often objects to having his nose examined, as he is so very sure that he has no nasal trouble These cases exist in all degrees of severity, from occasional eyeache or browache to acute suppuration in the sinus It is the more frequent but less obvious nonsuppurative cases that we are overlooking and treating for muscular anomalies I have relieved the milder unilateral pain at least twenty times in my own case by applying suprarenalin to the middle turbinal of the affected side

My thanks are due to Dr Casey Wood, Dr Frank Allport and Dr Thomas Woodruff for their courtesy in referring their cases to me for examination and for their assistance in the study of this condition

DISCUSSION

DR. NELSON M. BLACK, Milwaukee, said that "the more obvious and striking forms of independent diseases have for a long period been recognized and treated," but from a perusal of the literature it is quickly seen that this association or relation has only been recognized by having the presence of the nasal condition forced on the observer, either by the existence of a profuse discharge, the patients calling attention to some existing nasal condition, or the ocular conditions have been reported as complication to some sinus or antrum trouble The conditions the author bases his paper on have not been recognized and treated as such until recently The results observed and the relief obtained by the proper treatment of these ocularly manifested nasal conditions is truly wonderful, and it is not surprising that so many look on the reports of these apparently miraculous cures with skepticism and in their outspoken derision seek to hide behind the cover of a multitude of sins—hysteria

In all probability the symptoms are the result of a combination of factors existing for a long period of time the extension to the eye being a sort of an overflow, as it were, at first, the ocular symptoms only manifesting themselves at intervals when an exacerbation of the primary cause takes place If, however, the nasal conditions are allowed to go untreated, pathogenic changes take place in the eye from the constant irritation and in place of symptoms of disturbed functions there are manifested grave ocular conditions viz diseases of the uveal tract, cataract, choroiditis and even glaucoma There is nothing in the physiology of the accessory sinuses to aid in arriving at a conclusion as to the cause of sinus disease being manifested by ocular symptoms in fact, very little can be found regarding their physiologic function The close sympathetic relation between the nose and the eye is well known by tickling the nasal mucous membrane a copious flow of tears will take place and vice versa, a sudden flash of bright light will frequently cause sneezing The constant changes in function of the nasal lining especially when there exists some pathologic condition must affect the nervous mechanism of the eye which is so closely related and help bring about vasomotor changes

Dr Black did not agree with Dr Brawley regarding probing

6. Laryngoscope Oct., 1905.

7. Posey Jour. Eye Ear Nose and Throat Diseases March April 1905 THE JOUR. A. M. A. Sept. 9 1905

8. Fish Amer. Journal Oph. December 1904.

and irrigation. He has seen great benefit derived from its being carefully carried out, there is no doubt, however, of the liability of a return of the condition if operative measures are not resorted to He has reported one case of retrobulbar neuritis of frontal sinus origin. Another case is under treatment at the present time and is making rapid progress, vision having improved from 6/lx to 6/xii in five days time with an enlargement of the visual field and reduction of size in an absolute central scotoma. Further study of the subject will undoubtedly be productive of some radical changes in the now generally accepted etiology of many eye diseases

DR S L. LEDBETTER, Birmingham, Ala., referred to the case of a man who complained of pain in the frontal region and defect of vision in one eye He gave a history of a severe cold, but no suppuration in the nasal cavities. On examination he found that the eye was apparently perfectly healthy, except for a slight cloudiness in the macular region, vision equalled 20/100 The other eye was perfectly normal The pains increased for the next two days He made a diagnosis of posterior ethmoidal and probably sphenoidal engorgement, ordered a Turkish bath, laxatives, a little alterative tonic, and light diet In a few days the patient was only able to count fingers at two feet with that eye and complained of much more pain, so that opium had to be given He was put on diaphoretics, pilocarpin and other things, and kept up the laxative treatment and ordered rest. He reported again in two days complaining of the other eye and on examination it was found that both optic discs were swollen, almost obscure, an evidence of retrobulbar neuritis The pains were so severe that even with opiates he could not sleep This continued for several days, when the patient became more comfortable. The second eye had never become quite so bad as the other, vision equalled 15/50 The pains subsided and the evidences of engorgement were passing away, but the optic neuritis still persisted. There was no history of specific trouble or rheumatism

DR BRAWLEY said that he had probed and irrigated the sinuses only when he discovered pus in the middle meatus, because probing the sinuses complicates the diagnosis He laid stress on the fact that many of these cases, seen early, do not have pus, and probing may lay one open to the criticism of having caused the suppuration when it occurs

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TO WHAT EXTENT CAN THE GYNECOLOGIST PREVENT AND CURE INSANITY IN WOMEN?*

W O HENRY, M.D
OMAHA.

REVIEW OF LITERATURE.

The question of the relationship existing between pelvic diseases in women and insanity is one which has occupied the attention of the profession many years, more particularly since 1857, when Loiseau presented a thesis on the subject, "Sympathetic Insanity," which caused considerable discussion, and also since the paper by Hergt, in 1870, on the subject, "Women's Diseases and Disturbances of the Mind" Although from that time to the present the subject has been discussed to some extent in medical societies and through medical journals, even yet great difference of opinion exists among gynecologists and alienists When I read a paper before the Nebraska State Medical Society in 1895 on the subject, "Relations of Insanity and Pelvic Disease in Women" there was little sympathy expressed by the members of the society and my conclusions then given which more extensive experience has served to confirm were not received with favor Those important conclusions were as follows

1 The relations of insanity and pelvic diseases in women have not heretofore received the attention which their importance deserves, nor which they will receive in the near future.

2 Not all insane women who have pelvic disease as a factor can be cured by local treatment or operations, but in the early stages such treatment or operations, in many cases, would have been curative or preventive

3 Cases not benefited by local and conservative operations might still be cured by more radical operations

4 All insane or epileptic women should have their pelvic organs most thoroughly examined at once and all diseased conditions should be relieved as quickly as possible by whatever means are necessary

5 If these things be true, how important for the general practitioner, under whose care all of these cases first come, to see that all pelvic disorders in women are properly treated and cured as soon after their discovery as possible, in order to prevent these mental troubles

6 Finally, how important for our insane women to have the benefit of what the gynecologist can do at the earliest possible period

In our text-books on gynecology you will look almost in vain for any encouragement along this line of thought. Pryor, Davenport, Gilliam, Penrose, Garrigues, Byford, Hirst, Ashton, and Dudley give it no consideration Kelley gives it but scant notice, and one is cautioned against any operative procedures in women who are inclined to mental trouble

In his edition of 1901 McNaughton-Jones devotes one brief chapter to it and says

The relation of disordered sexual functions to mental diseases has hardly received the careful attention on the part of the profession generally that it most decidedly demands Pieque has found as high a proportion of affections of the generative organs among the insane as 88 per cent. He reports favorably of the effects of operations on the insane in a fair proportion of those affected Sherwood Dunn reviews the entire subject and the experience of a number of psychologic and gynecologic authorities and comes to the general conclusion that affections of the pelvic viscera in women are often associated with insanity in the relation of cause and effect, that such lesions predispose to the occurrence of puerperal insanity, that they impede convalescence from mental disorders and operative interference should be advocated in those cases in which a pronounced affection of the uterus or adnexa is discovered.

On the other hand, Reed says

The reader can readily see why it is unnecessary to discuss the relationship between the pelvic disease and epilepsy, chorea and other nervous diseases The truth can all be summed up in a word. There is no relation The same holds good with regard to the insanities.

In 1896 W P Manton said

We long ago came to the conclusion that to use the knife in restoring the sick mind to health as the result of pelvic disease should be abandoned.

Yet strange to say, he goes on to state

I have never operated on an insane woman to whom I could say with certainty that dementia had been wholly the result of pelvic disease and a decided improvement in the mental condition and a decided improvement in the mental condition and health of the patient

So far as the testimony of [illegible] is to be overwhelmingly against the [illegible] operating either to prevent or cure insanity. Thurnam, of the Wakefield Asylum, in a recent analysis of the records of 2,814 cases of insanity in females admitted to the asylum, found that [illegible] Tuke at least two of these [illegible]

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-first Annual Session June 1900.

If this be a generally accepted prognosis, how important for us to determine just what the gynecologist can do to prevent insanity before it occurs or cure it after it occurs

Chapin's definition is

Insanity is that mental condition characterized by a prolonged change in the usual manner of thinking acting and feeling the result of disease or mental degeneration

The *Alienist and Neurologist* gives this definition

Insanity is an expression only of functional and organic disorder, remove the disorder on which the insanity depends and the return to mental soundness is secured.

Charles P Bancroft says

Insanity is not a specific entity, it is rather an ever varying symptom complex, corresponding to many diverse underlying disease processes Insanity may be said to be a prolonged departure from the individual's normal method of thinking, feeling and acting, due to functional or organic disturbances of some portion of the encephalon

The definition of Bondurant of the Alabama Insane Hospital is

The facts obtained seem to justify the opinion that many of the patients in whom insanity and nephritis co exist are in sane because of the nephritis, that is, the insanity is one of the mental symptoms of acute or chronic uremic intoxication

H A Tomlinson, Minnesota, says

The pathologic history of insanity is known to be vague and indefinite and from the standpoint of histology, furnishes very little information to the student in search of specific morbid changes which will explain the clinical manifestations of aberrant cerebral functioning This apparent absence of definite anatomic change is to be explained by the conditions which give rise to insanity, namely, the precedence of physical disease shock overwork, mental strain, infection, or auto intoxication from some source Consequently, the insanity can not be said to be dependent on the changes found to be present in the neuron, but rather, the histologic change and the insanity follows the conditions generated by antecedent somatic changes to which they are consecutive.

Kohlberger says

The source of mental diseases is not only in the brain but in all the organs

Morrell says

Although the brain is always the seat of insanity, it is not always the seat of its cause

From these opinions I think we may say that insanity is that mental condition characterized by a prolonged change in a person's usual manner of thinking, acting and feeling without apparent cause and yet, doubtless, the result of some brain or other bodily disease

In the report of the New York State Commission of Lunacy for the year ending Sept 30, 1906, the following were the causes assigned for insanity in 4,819 cases admitted to the New York hospitals for the insane in the preceding twelve months

Moral Causes Adverse conditions loss of friends business troubles, etc, 354, mental strain, overwork, worry, 384, religious excitement, 65, love affairs, including seduction, 32, fright and nervous shock, 95

Physical Causes Alcoholism, 476, sexual excess, 24 venereal diseases, 94 masturbation 90 sunstroke, 50 accident or injury, 87, pregnancy, 9, parturition and puerperium, 136 lactation, 15 change of life 100 fevers, 23, privation and overwork 80 epilepsy 183, other convulsive disorders 5 diseases of the skull and brain 76, old age 230 exophthalmic goiter 1, epidemic influenza, 40, abuse of drugs 44 loss of special sense 6, uremic poisoning, 2, other autoinfections, 1 heredity 357 congenital defects, 44, unascertained, 1,413 Of the total number 1,069 had inherited predisposition.

Tomlinson says that of 937 admitted, 212 had a heredity of insanity, while 266 had a heredity of cancer and 170 had a heredity of phthisis, 123 had sexual excitement or perversion, 233 had some menstrual disorder, 443 had leucorrhea, 408 had uterine displacement, 222 of these last had adhesions, 79 had disease of the ovaries, 337 had laceration of the cervix, 424 had laceration of the perineum, 238 had cystocele, 229 had rectocele Then he says

People become insane Why? Because of defective nervous organization and not because of cardiac or renal disease The physical disease simply upsets the unstable nervous organization So far as we have been able to determine from repeated and persistent cross examination, it is safe to say that there had been periods of confusion, suspicion and dread for at least a year before the untoward conduct or overt acts of the individual made the nature of his conduct manifest to his friends

J W Wherry,[1] Dansville, N Y, writes a very instructive article in which, among other things, he says

The evidences of brain pathology, in abnormal intellectual states, as in idiocy, imbecility, dementia and general paralysis are at least sufficiently established to call for further investigation, but in the emotional insanities I believe it is useless to probe the brain longer for a secret it does not hold

I can see no good reason why there should be any doubt about the origin of melancholia in visceral conditions rather than in a disease of the brain

Maudsley said

It is clear as day that temporary bodily conditions, however they may have been brought about, will play their part and it may be well that future researches will discover the causes of the characteristic features of some varieties of mental derangements in the diathetic states and the actual bodily disorders which are associated with them There is the most perfect harmony, the most intimate connection or sympathy between the different organs of the body as the expression of its organic life Unity of the organism beneath consciousness and the brain is quite aware that the body has a liver and a stomach and feels the effects of disorder in any one of the organs

Ferrier says

Healthy states of viscera produce pleasurable feelings and morbid states of viscera produce painful or depressing feelings Visceral derangements are frequently the cause and always the accompaniment of melancholic depressions

C C Hersman,[2] alienist to the South Side Hospital, Pittsburg, also read a paper before the Section, in 1899, in which he said

It is a well known fact that the ovaries and testicles have at least three distinct actions, the first, generation, the second, their action through absorption on the central nervous system, which give to men and women their physical, moral and intellectual characteristics, the third is a special tonic action which reinforces in a special way the action of the spinal cord and brain

In addition to this I am not sure, but we will find eventually that there are nerve centers in the uterus, and possibly also in the tubes, which have an important influence on the mental equilibrium He cites in his paper two interesting cases from the insane department of the St Francis Hospital as follows

A Jewess, married, very excited was in the hospital for a few months She also suffered from chronic endometritis, was curetted and went home in three weeks, with no mental symptoms Again, a Polish girl who had been in the hospital for more than a year with no improvement mentally, on examination was found to be suffering from chronic endometritis She went home cured in two weeks after curetting the uterus They have both remained well a period of about five years

1 Am Jour of Insanity January 1906

2. Uterine Diseases and Insanity THE JOURNAL A M A., vol xxxiii p 709

I am aware we usually look to the brain when searching for the cause of insanity and many times, I fear when we should look elsewhere. It is necessarily the immediate seat of the disturbances, but the remote cause may be very foreign to that organ Many times, if the uterine disturbances were relieved, the insanity would be removed I have seen, as already stated, in the treatment of insanities the result of uterine disease, the local or surgical treatment of the trouble not only cure the uterine disease, but effectually cure the concomitant disease occurring in the brain, thus showing the mysterious (?) and unaccountable (?) connection between them

The "Reference Handbook of the Medical Sciences," 1902, in the very able and rather exhaustive article on insanity, says, when speaking of the accessory causes

It is noticeable that organic diseases of the uterus and its appendages are seldom accompanied by profound nervous storms On the other hand, the leucorrhœa, amenorrhœa, profuse menses vaginismus, chronic uterine catarrh, and a host of other comparatively benign affections are now and then followed by mental disturbances Although it may be said, in general, that the influence of the affections of the generative apparatus as a cause of insanity in woman has been exaggerated, as an accessory factor it is often worthy of consideration

Thus we see that the general consensus of opinion now among alienists seems to be that various bodily diseases may be the exciting cause of insanity, and hence the importance of curing these diseases as a prerequisite to restoring mental health Then, too, I think, it is generally conceded that there is a closer and more intimate relationship between the brain and sexual organs than other viscera, so that any disturbance there will more easily affect the mental condition than diseases of any other organs and it is remarkable how large the percentage of pelvic troubles is among insane women and to what extent these women are cured of their mental troubles when the local pelvic irritation is removed For example, in 1895, Dr Rohe, of Maryland, said

The number of my cases is too small (34) to allow me to draw conclusions, but if anything of practical value can be deduced from them, it is that puerperal insanity, melancholia and simple mania offer the best chances of cure from the proper treatment of local lesions in the pelvis I am convinced that earlier operation in appropriate cases would have largely increased the proportion of recoveries

And yet of his 34 patients operated on, 14 were cured, 5 improved and none made worse mentally

Dr A T Hobbs, of the London (Ontario) Asylum, with the gynecologist, Dr Meek, carefully and systematically examined 220 women who were confined in the asylum, and found 188 of them, or 85 per cent, suffering from some pelvic lesion They proceeded to operate on 173 of these, and their report is that 42 per cent of these recovered, 24 per cent were improved, 32 per cent. remained the same and 2 per cent died

LeRoy Broun, of the Manhattan State Hospital, read a very excellent article before the Brooklyn Medical Association in January of the present year in which after citing freely from various hospital reports, he says

Thus it is seen that in all insane asylums a large majority of the women inmates suffer in some form from a disease of the pelvic organs

Insane patients being as much subject to physical diseases as their more fortunate sisters have equally as much right to be relieved Such is now recognized and the majority of the institutions have on their staff consulting surgeons who render such relief as needed Those unfortunates are now treated as if they were not insane as far as their physical condition is concerned As stated no operations have been undertaken with the direct object of influencing the mental status The physical status alone has been considered As a result of adopting this course fully three fourths of the patients operated on were sufferers from forms of mental disease recognized as unfavorable and in whom little permanent progress can be made in ameliorating their mental state The unfortunates of this class have as much claim for physical relief as those of more amenable forms of mental disease Two hundred and forty two patients have been given some form of gynecologic operation, which is a little less than 5 per cent of the total number of women in the hospital during the period covering the operations Of those operated on there have been 62 abdominal sections, 51 operations for displaced uteri and 120 minor plastic operations As a result of all the operations done (242) 112 patients have been physically benefited in a marked degree 107 have been noticeably improved though not to such a great extent as in the previous number Of the remaining patients five died, of which number two deaths were attributable to the operation and three to natural causes The statement made by some writers that operative measures for diseased conditions at times aggravate the insanity of the patient is not in accord with my experience No instance of such an occurrence exists among patients I have operated on The same statement is made by Manton concerning his operations in the East Michigan Asylum covering a period of 20 years and by Picque, who has been operating for 12 years among the insane of Paris The rare occurrence of true psychosis following gynecologic operations on women not previously insane has been brought out by Rohe[1] He states that, as a result of communication with all the asylums of the United States and Canada, he found that in the course of ten years prior to 1893 only 25 patients had been registered in all these asylums as having become insane after gynecologic operations In studying the histories of the patients on whom I have operated I find that of the 242 patients, 138 still remain in the institution and 104 have been discharged Of those discharged 43 are recorded as recovered mentally Twenty of these 43 discharged as cured have had their mental recovery materially hastened as a result of the physical improvement arising from the operation done on them While in the majority of these patients there had been some mental improvement before the operation was done, yet in all of the twenty the psychic improvement following the operation was marked, as also was the steady progress toward mental recovery

While I do not wish to criticise the author of this paper, still I am confident that his small percentage of cures resulted from the fact that he did not entirely remove all pelvic disturbance, or in other words his operative work was not radical enough Of course, simple justice will require us to admit the possibility of another factor, and that is too long duration of the mental disturbance before the pelvic trouble was looked after but the former seems to me far more likely because the doctor's point of view was not altogether right for he should have gone at his pelvic work with the primary object of so thoroughly getting rid of the irritation there as not only to cure the physical ailment but to be confident that by perfect results here he would reap much greater benefits namely a restored mentality and no doubt, richer and better results would have crowned his labors To illustrate what I mean, I have selected a few cases from his report read at the sixty-first annual meeting of the American Medico-Psychological Society at San Antonio, April, 1905

SELECTIONS FROM LEROY BROUN'S CASES

Mrs S age 39 General health Fair Disease Dementia paralytica ovarian cyst and retroflexed uterus Operation Removal of cyst suspension of uterus Result Physical condition satisfactory no marked mental improvement

Although the result of this operation was satisfactory as far as the physical condition was concerned [illegible] not surprised that there was no mental [illegible]

[1] New York Med Jour 1895

ment, for here, whatever else may have been wrong, the suspension of the uterus granted a new course of pelvic irritation, being wholly irrational and unreasonable

Miss G, age 40 Disease Chronic melancholia, retroflexion of uterus, with fibroids Duration Two years Operation Myomectomy with Bissell's operation. Result Not satisfactory, mental state unimproved.

In this case there is no question that there was some ovarian trouble and that a hysterectomy would have given better results

Mrs F, age 28 Disease Chronic melancholia, retroversion and ovarian cyst. Duration Three years Operation Curettage anterior vaginal section, removal right ovarian cyst and shortening of round ligaments Result Operation satisfactory, mental condition unimproved

There can be little doubt that there was left behind sufficient difficulty to maintain the irritation previously existing before the operation

Mrs R., age 32 Disease Acute melancholia, retroversion, laceration of the cervix and perineum Operation Curettage hysterorrhaphy Result Operation was successful, no improvement mentally

Here, too, the local irritation was not entirely removed

Mrs L, age 28 Disease Acute melancholia, adherent retroversion with double pyosalpinx Operation Excision of cervix and perineorrhaphy with suspension of uterus

No wonder the patient did not recover, for there must have remained an abnormal amount of pathology in the pelvis

Mrs S, age 34 Disease Chronic melancholia with retroflexion and laceration of cervix and perineum Duration Three and one half years Operation Hysterorrhaphy curettage, excision of cervix and perineorrhaphy Result No mental improvement.

Mrs L, age 39 Disease Chronic mania with multiple fibromyomata and retroversion Duration Ten years Operation Myomectomy and hysterectomy Result Operation successful but no mental improvement

Here there can be no doubt that a supravaginal amputation, with probable removal of tubes and ovaries, would have given better results, and certainly if done earlier the chances of recovery would have been increased

Mrs H, age 35 Disease Paranoia with adherent retroversion and laceration of cervix and perineum Duration One year Operation Uterus suspended, left tube and ovary removed, excision of cervix and repair of perineum Result Satisfactory but no mental improvement

Certainly these operations, while they removed part of the pathology, left as much behind to maintain the mental aberration and, therefore, were not adequate

Mrs M., age 25 Disease Acute melancholia of two months' duration, with double adnexa diseases Operation Both adnexa were removed and hysterorrhaphy Result Mental condition unchanged.

Miss F, age 36 Disease Chronic melancholia of eight years duration with endometritis and retroversion. Operation Curettage. Result Physical condition improved and mental condition only slightly improved

Here, with an endometritis and retroversion probably of eight or ten years' duration, there could not have been a healthy condition of the ovaries and tubes Neither could the retroversion be left alone and the pelvic irritation relieved. Hence, this case did not have the relief which might have been afforded by more thorough treatment, and certainly we could have reasonably expected more had the operation been done earlier

AUTHOR'S CASES

My own cases now comprise a total of 28 Of this number only one patient has been operated on too recently to tell what the ultimate result will be The others have been operated on long enough to signify something of the benefit they will receive. The first ones were operated on nine, ten and eleven years ago and remain well to the present time Sixteen of the patients made a perfect physical and mental recovery One died soon after the operation All except this one were temporarily benefited and none made worse. Two have since died of the intercurrent troubles Eight, although slightly improved, I have not been able to trace and do not know their condition The one so recently operated on and very much better I can not yet report on, although the improvement is marked, and apparently the recovery will be perfect

CASE 1.—Woman, aged 34, married ten years, never pregnant, had chronic endometritis with cystic ovaries Removal of the tubes and ovaries was done in 1895 and she has remained well from that time until now She had acute mania

CASE 2.—Woman, aged 34, mother of one child, ten years old Patient had retroflexed uterus lacerated cervix and cystic ovaries Cervix was repaired, tubes and ovaries were removed and patient made a good recovery mentally and physically

CASE 3.—Woman aged 42, mother of several children, suffered from a large subinvoluted uterus with lacerated cervix, retroflexion and prolapsed ovaries She had melancholia and dementia for a year and a half Supravaginal amputation of the uterus, tubes and ovaries was made after which she made a perfect physical and mental recovery

CASE 4.—Woman, aged 30, mother of one child, had melancholia, subinvoluted uterus, degeneration of ovaries Curettement was done and tubes and ovaries removed Patient made good recovery from operation and was mentally improved, but I have lost sight of her and can not now trace her

CASE 5.—Woman, aged 35, mother of two children, had retroflexion of uterus, chronic oöphoritis and melancholia. Removal of tubes and ovaries resulted in perfect physical and mental health

CASE 6.—Woman, aged 45, mother of two children, suffered from melancholia, had a large retroflexed uterus, prolapsed tubes and ovaries Supravaginal amputation of the uterus and removal of the tubes and ovaries resulted in perfect physical and mental health

CASE 7.—Woman, aged 40, had melancholia, large retroflexed uterus, prolapsed tubes and ovaries Vaginal hysterectomy resulted in immediate improvement, but after she returned home I lost sight of her and have not been able to locate her since.

CASE 8.—Woman, aged 42, mother of five children, suffered from melancholia, chronic oöphoritis and cystic degeneration of the ovaries Removal of tubes and ovaries resulted in perfect mental and physical health

CASE 9.—Woman, aged 30, married several years, never pregnant, had retroflexed uterus, degeneration of the ovaries and melancholia for several months Vaginal hysterectomy resulted in slight improvement, but she finally refused to take food and died in the asylum

CASE 10.—Woman aged 50, mother of two children, had passed the change of life Uterine fibroid with calcareous degeneration was present Vaginal hysterectomy was done and resulted in physical and mental soundness

CASE 11.—Woman, aged 36, mother of two children, had bad laceration of the perineum, subinvoluted and reflexed uterus and prolapsed ovaries Repair of lacerations and removal of tubes and ovaries resulted in perfect cure, physical and mental

CASE 12.—Woman, aged 30, married several years, never pregnant, had retroflexed uterus and periodical mania After vaginal hysterectomy she made physical and mental recovery

CASE 13.—Woman, aged 27, married several years, never pregnant, had cystic degeneration of the ovaries and melan

ia Removal of tubes and ovaries resulted in physical mental health

ASE 14—Woman, aged 38, retroflexed adherent uterus and ipsed tubes and ovaries with melancholia and dementia, been confined to her bed for several months Vaginal hys tomy was done without benefit. The patient died two s later

SE 15—Woman, aged 35, married several years, no chil had cystic ovaries and melancholia Removal of tubes ovaries resulted in physical and mental health

SE 16—Married woman, aged 35, never pregnant, had degeneration of ovaries with melancholia. Removal of and ovaries resulted in physical improvement and some il improvement. I lost sight of her and have not been o locate her since

ASE 17—(Details lost)

CASE 18—Woman, aged 42, mother of three children, developed puerperal mania with septic condition of the uterus. Supravaginal amputation with removal of tubes and ovaries resulted in physical and mental improvement. I have lost sight of the case and do not know the ultimate result.

CASE 19—Woman, aged 52, mother of several children, passed the menopause six years, had suffered from hemor rhoids and retroflexed uterus with ulceration of the cervix and developed melancholia of severe type. Vaginal hysterectomy and removal of hemorrhoids resulted in perfect physical and mental health

CASE 20—Woman, aged 23, single, had severe dysmenorrhea and periodical attacks of mania, with melancholia and pro lapsed cystic right ovary On removal of ovary patient im proved both physically and mentally

CASE 21—Woman, aged 40, mother of four children developed melancholia, after her last child was born There was retroflexed uterus with prolapsed tubes and ovaries Vag inal hysterectomy resulted in physical and mental health

CASE 22—Woman, aged 36, mother of two children had multiple uterine fibroid Abdominal hysterectomy resulted in physical and mental cure.

CASE 23—Young girl, 19 years of age, with retroflexed uterus, prolapsed tubes and ovaries, developed melancholia with mania Ventral suspension was done but she made no im provement and the girl is still in the asylum

CASE 24—Woman, aged 38 mother of four children, had retroflexed uterus with cystic ovaries and melancholia and was bedfast for several months Supravaginal amputation and removal of tubes and ovaries resulted in satisfactory physical recovery and some mental improvement, since which time I have not been able to trace the case

CASE 25—Married woman, aged 26, mother of two children, developed puerperal mania after her last child was born and after a thorough curettement for septic uterus and wiping out with carbolic acid she made a rapid recovery both mentally and physically

CASE 26—Unmarried woman, aged 28, with pronounced melancholia was confined to her bed with intramural fibroid the removal of which resulted in some physical and mental improvement, but two years later she died without having fully recovered her normal mentality

CASE 27—Young woman, aged 27, severe dysmenorrhea since early girlhood with periodic attacks of mania and melancholia and cystic degeneration of both ovaries Removal of tubes and ovaries has resulted in marked relief both mentally and physically, but the time is yet too short for a final report in this case

CASE 28—Mrs B (Dr S), aged 30 mother of two chil dren had retroflexed uterus and cystic ovaries which resulted in melancholia Abdominal hysterectomy was done tubes and ovaries being removed She made a good recovery and was mentally improved when she left the hospital but I have been unable to trace her since and do not know the final outcome

CONCLUSION

Dr A T Hobbs now superintendent of a private sanitarium at Guelph, Ont, in a recent letter, sums up his views as follows

Pelvic diseases interfere with mental health in two ways Through reduction of physical well being and through reflex irritation The removal of disease, the restoration of dis placements, the extirpation of tumors and repair of injuries will first restore the physical health and through it the men tal condition, and, second, will remove a source of reflex irritation Granted that a number of cases of puerperal in sanity will recover without operation, I know positively, from experience, that two things have occurred and will occur namely, that good mental health is hastened by surgical inter ference and that a number of patients would never have re covered without surgical interference and that the recovery is due entirely to the removal of serious diseases interfering with the return to physical and through it to mental health Les ions of the ovaries are, without doubt causative factors, and disease of the uterus too, in producing insanity, in cases of nervous heredity

I would like to emphasize another point, and that is that many insane women who have pelvic trouble do not complain of it While this also obtains in women who are not insane, yet it is very much more apt to be the case in women who are mentally unbalanced as is attested by those who have given the subject careful thought and as shown by my own cases, and again I would like to insist on the point that sometimes there is serious ovarian degeneration which is not discoverable by ordinary pelvic examination So that I am sure some of these patients in asylums who are examined by the most competent gynecologists have serious ovarian disease which could only be detected by opening the abdominal cavity and personally making a macroscopic inspection of the ovary So that it is not sufficient to say that examination has been made and no pelvic trouble found for, as every operator knows, a good many times when the abdomen is opened and the ovary is carefully inspected serious disease is found, even when not suspected by bimanual examination

I wish, then, to conclude my paper by insisting that the gynecologist can prevent the occurrence of insanity in many women with very unstable nervous organization if he will, by treatment or operation, remove all pelvic irritation, and, again, he may cure various forms of insanity in women if such irritation is entirely removed and it is important not to substitute a lesser form of irritation in getting rid of the more serious one Conservative treatment and operations are all right if they really secure complete removal of all pelvic irritation but to get all the results we have a right to expect from gyne cology and which we can undoubtedly secure in a very large proportion of cases we must wholly eradicate the pelvic irritation by whatever means are necessary, no matter how radical the work required

DISCUSSION

Dr. W P MANTON Detroit Mich said that his experience with this subject extended over many years that he was the pioneer in this line and the first to take up systematic work among insane women For seventeen years he has been con nected with two large state institutions in Michigan and he had to do also with two private hospitals for the insane so that several thousand insane women have passed under his ob servation One of the best recent articles on this point is by Dr LePoy Broun in a late number of the *Journal of Medical Science* Dr Broun has had large opportunities for observation and arrives at the same conclusions as Dr Manton He took exception to the first item in Dr Henry's analysis What he began work every asylum superintendent in the land with the exception of Dr Henry M Hurd now of Johns Hopkins University but then superintendent of the Eastern Michigan Asylum was utterly opposed to any gynecologic treatment with insane women If the physicians would learn some thing about these conditions [illegible] Manton, because he had a great many c

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this matter up repeatedly He does not believe this to be true, however for as the result of work done there is to-day hardly an institution which has not a gynecologist connected with it While there is unquestionably a relationship between the pelvic organs in woman and the brain, Dr Manton does not believe that, except in possibly rare instances, disease of the former gives rise to mental alienation Whenever insanity exists however, and there is a local point of irritation present in either the pelvis or the abdomen, the mental condition is often made worse, and by removing the irritation, no matter how demented the woman may be, she will be made more comfortable and is more easily taken care of In a large number of cases he has never seen an instance in which the mental condition was not relieved to some extent as the result of this kind of treatment In his experience some 81 per cent. of insane women suffer from local disorders, but if 100 women who are walking about in apparent perfect health were examined it will probably be found that as large a percentage are suffering from some abdominal or pelvic disorder also So that the finding of this percentage of local disease among insane women really means that a large number of women, sane or insane, have this burden to carry Operations undertaken solely for the cure of mental disorder in insane women are wrong but every insane woman suffering from abdominal or pelvic disease is as much entitled to relief from the somatic condition as is her sane sister The late Dr Rohé, who wrote a good deal regarding the curability of insanity in women through surgical means appears to have been too sanguine, and Dr Manton is not altogether certain about Dr Rohé's cases Another observer Dr Hobbs, was assistant physician at the London (Ont.) asylum under Dr Buck, when he began his investigations Hobbs results and Dr Manton's do not tally and Dr Manton is left to conclude that Dr Hobbs deals with a different class of cases Dr Buck became very enthusiastic regarding the operative cure of insanity

DR F F LAWRENCE, Columbus, O said that this subject was discussed in a symposium in Denver when Dr Joseph Price was chairman, also in Atlantic City in 1900 The question among alienists has been pretty thoroughly determined, that back of it all is an unstable nervous organization and the question of attempting to cure insanity *per se* by surgery, is somewhat far fetched As Dr Manton said, the insane person is entitled to the same character of surgical relief that the sane person expects. The surgical condition may be causative in a sense in a great many cases The possibility of a patient recovering her mental balance is greater if all physical suffering can be removed If she has a bleeding fibroid she has a better chance to recover her health if it is removed The late Dr Carpenter and he had examined between 100 and 200 patients In the neighborhood of 84 per cent of the total number had some form of intrapelvic trouble Of that number the history of only about 21 per cent showed that the abdominal condition preceded the mental He advocated surgery for all surgical conditions whether in sane or insane, but in the absence of gross pathology insanity or other neuroses can not be reasonably expected to yield to any form of surgery

DR W O HENRY Omaha said that he was glad to hear the remarks of Drs Manton and Lawrence but that his contention is that these pelvic diseases in women of unstable nervous organization are the particular thing that often upsets the mind and the curing of these things before they have upset the mind will in such cases, prevent the breakdown So long as no one can tell what insanity really is he thinks that practical experience in cases that are cured counts for more than anything else When he has operated on cases and five or ten years later the patients are still well, that counts for more than all the theory on earth Of 28 cases he had 16 patients go home well This is of real practical value He does not claim that every insane woman can be cured by operation but many can, and every insane woman should be given the benefit of all possible aid which can be afforded by the removal of all pelvic irritation And finally, by curing these pelvic irritations in women of unstable nervous organizations, before insanity occurs, its development may often be wholly prevented

THE NOMENCLATURE OF ENDOMETRITIS*

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The word endometrium should be used to refer to the mucous membrane which lines the body of the uterus The mucosa of the cervical canal is anatomically and physiologically a different structure, and although it may properly be called endometrium, usage more or less restricts that term to the mucosa of the body of the uterus

The endometrium is intimately connected with the musculature of the uterus and its circulation is greatly influenced by changes which occur in the blood vessels of the myometrium and by the tonicity of the uterine muscle The endometrium is continuous with the lining membrane of the tubes and with the epithelial layer of the cervix, therefore, it follows that the endometrium is influenced by all inflammatory affections, displacements, new growths and congestions of the genital organs

By some it is held that the term endometritis (inflammation of the endometrium) should be applied only to those lesions of the endometrium which show histologically the products of an active reaction of the tissues to an irritant According to this view, endometritis is always the result of infection with a micro organism By others it is held that there are causes of inflammation other than bacterial, and that a long continued inflammatory process, produced either by bacterial infection, or by mechanical or other forms of irritation, may produce hyperplastic or atrophic changes in the endometrium, without any histologic evidence of an acute inflammatory reaction

Such a distinction results from a difference in the conception of what constitutes an inflammation and has little practical importance Thus, what is considered glandular hyperplasia of the endometrium by the adherents to the first view is called glandular endometritis by the adherents to the second It is our belief that it will lead to less confusion of terms to regard "glandular hypertrophy" of the endometrium and "atrophy" of the endometrium as the end results of a chronic endometritis, or as Sänger has aptly stated it, the residuum of an inflammation

The classification of endometritis should be purely anatomic In other words, it should be divided into the acute and the chronic forms While acute endometritis involves all of the component parts of the endometrium indifferently the chronic form may affect especially the glands or the stroma Any classification of endometritis, based on etiologic factors is faulty, because the etiology of chronic forms can not always be determined, and, therefore, the classification in many cases would be useless There is also no relation in the chronic form between the cause and the form of the anatomic change in the endometrium

A classification based on clinical symptoms, as catarrhal, purulent, or hemorrhagic, is also bad, for such terms might be easily applied to different stages of the same process and a classification based on symptoms leads to an almost endless variety of forms

The age of the individual also should be given no place in the nomenclature Senile endometritis conveys no pathologic meaning, the terms juvenile or adolescent endometritis may be employed just as properly

In conformity with inflammatory lesions elsewhere, we may speak of acute and chronic endometritis The chronic form may further be divided into glandular and interstitial, when the glands on the one hand or the stroma on the other are especially involved Pathologists may subdivide the chronic forms in order to indicate anatomic peculiarities, but this is not necessary for the clinician

Endometritis except in the acute form, rarely exists alone It is usually complicated by inflammatory lesions of the cervix or of the pelvic viscera, lacerations of the cervix or of the

*Report of the Committee on Nomenclature of Endometritis to the Section on Obstetrics and Diseases of Women at the Fifty seventh Annual Session of the American Medical Association, June, 1906

pelvic floor, retrodisplacements of the uterus, chronic pelvic congestion uterine or ovarian tumors

Except in the acute form therefore, which is incident to gonorrhea or to infection following labor abortion or instrumentation of the uterus, it has in itself little clinical importance It should be considered and treated with the exceptions noted above, only in conjunction with the lesion which produces it. In many text books this fact is not pointed out, and the student is led astray as to the frequency and the significance of the disease, and as to the necessity of its individual treatment

CONJUGATE DEVIATION OF THE EYES AND HEAD AND DISORDERS OF THE ASSOCIATED OCULAR MOVEMENTS

IN TUMORS AND OTHER LESIONS OF THE CEREBRUM *

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VARIOUS VIEWS DISCUSSED

Within the past two years the causes of conjugate deviation of the eyes and head have repeatedly been the subject of controversy, especially by certain French writers In 1904, Bard[1] advanced the sensorial theory of conjugate deviation, although this had been spoken of previously by Roux[2] This theory has since been ably supported, especially by Dufour,[3] and opposed by Grasset,[4] Dejerine and Roussy,[5] and others

Chiefly through the kindness of Dr Charles K Mills and Dr William G Spiller I have had the opportunity to study 16 cases of conjugate deviation of the eyes and head, 15 of which are with necropsy, and I have attempted to come to such conclusions as to the causes of conjugate deviation of the eyes and head as the evidence in these cases will permit together with the aid of cases in the literature

Disorders of associated ocular movements occurring in lesions of the cerebrum will be discussed only in so far as they occur in association with conjugate deviation of the eyes, and in cases of hemianopsia due to peripheral or central lesions The importance in clinical diagnosis of paralysis of associated movements of the eyeballs has been discussed only recently by Spiller[6]

The literature is replete with instances of conjugate deviation of the head and eyes as a result of lesions in almost every part of the brain Experimental investigations on lower animals confirm what has been said of the pathologic evidence, for it has been shown that electrical excitation of any portion of the brain, if of sufficient intensity, is productive of deviation of the eyes, or of the head, or both

There is good reason for this Perhaps no function is more highly specialized than that which is concerned with the movements of the head and of the eyes These are constantly moved for one reason or another, the auditory and the visual senses probably playing the most important part in the determination of these movements Such specialization of function necessarily needs and acquires a most complex cortical representation

With our present knowledge of cortical representation we should expect a motor center for the movement of the head, a separate center for the eyes, and still another for the combined movements of the head and eyes Within the past few years the cortical centers for all, or nearly all, motor function have been placed in front of the central fissure This has been borne out by experimental and pathologic evidence We should expect, therefore, that there should be but one motor center for each function, and that center anterior to the Rolandic fissure It has been shown that movements which are performed conjointly by corresponding or correlated muscles on both sides of the body have a cortical representation in each cerebral hemisphere Therefore we should expect a bilateral cortical representation for the deviation of the eyes and of the head

Any auditory, visual, or olfactory stimulus will cause conjugate deviation Touch, pain, or temperature stimuli will also cause deviation Besides it has been held that reflex or automatic and voluntary impulses initiated independently of these senses may cause such deviation

Taking up the subject of conjugate deviation of the eyes or of the head, or of both as the result of anyone of the above-mentioned sensory stimuli what is the cerebral mechanism of this conjugate deviation? Illustrating by the sensation of hearing, we presume that an auditory impulse is first transmitted to the auditory center in the temporal lobe from here it is carried by means of association fibers to the motor center from which motor impulses are transmitted to the nerve cells which supply the muscles concerned with the function to be performed In like manner a unilateral motor center for the conjugate deviation of the eyes and head should be in intimate connection by means of association fibers, not only with the auditory center in the temporal lobe, but also with the visual center in the occipital lobe and with the olfactory centers in the uncinate gyrus and the gustatory center wherever situated, and with the centers for touch pain and temperature senses in the parietal lobe. In brief, sensory irritation in any portion of the body will cause deviation of the head and eyes in the direction of the irritation through the correlated activities of the sensory and motor centers concerned Not only that but the centripetal fibers which transmit these impulses from the periphery to the cortex must be intact for the proper interpretation of these stimuli, and the centrifugal motor tracts must also be intact for the physiologic performance of their functions Should any portion of this most complex mechanism be disturbed, the result would be failure in normal deviation of the head and eyes, the deviation depending entirely on the nature and location of the lesion

The most recent writers on this subject Cantonnet and Taguet,[7] advance the idea of an automatic or reflex center for ocular movements in the optic thalamus In support of this they quote cases of cortical lesions in which there was paralysis of voluntary ocular movement, but in which reflex or automatic movements were preserved We have always regarded reflex movement of the eyes as best illustrated by the fact that the eyes will follow the moving finger or hand in different directions and that similar deviation will take place in response to various sensory stimuli It would perhaps be advisable if we were to define "reflex and [illegible]

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* Read in the Section on Nervous and Mental Diseases of the American Medical Association at the Fifty seventh Annual Session June 1906

† From the Department of Neurology and the Laboratory of Neuropathology University of Pennsylvania

1 Bard Semaine Medicale Jan 13 1904
2 Roux Arch de Neurol September, 1899
3 Dufour Rev Neurol April 15 1904
4 Grasset Rev Neurol., July 15 1904
5 Dejerine and Roussy Rev Neurol No 7 Sept 15 1905
6 Spiller Jour Nervous and Mental Dis. July and August, 1905

7 Cantonnet and Taguet Rev Neurol., No 7 1906 p 9.

matic" movements more clearly When the eyes deviate in a certain direction because of a noise, that is a reflex action, only in the sense that a movement is performed because of a sensory stimulus If the sensory part of the reflex arc is disturbed, as in deafness, no amount of noise will cause deviation Why should this be called an automatic movement?

It has been shown that in lesions of the thalamus, we sometimes have such symptoms as forced or involuntary laughing or crying, and in lesions of the superior cerebellar peduncle there may be incoordinate movements of some of the limbs These are examples of automatic movements If we assume that a similar automatic center exists for ocular movements in the thalamus, should not a disturbance of such a center cause forced or incoordinate ocular movements?

In his very able presentation of the subject of associated ocular movement, Spiller[6] agrees with others that paralysis of associated ocular movement laterally is due to lesions of the posterior longitudinal bundle, and asserts that a paralysis of upward and downward movement is probably the result of a lesion near the oculomotor nuclei He believes that a tract similar to the dorsal longitudinal tract, and possibly a part of this fasciculus, situated near the oculomotor nuclei, connects these nuclei, and that an interruption of the tract causes failure of associated upward or downward ocular movements He does not admit the need of a basal coordinating center for ocular movements, near the oculomotor nucleus

When the eyes follow the finger, this is really an associated movement, and the result, not of a pure reflex action, but of a distinct sensory (visual) impression, in the same sense that a noise (auditory impression) will cause deviation of the eyes If the sensory arc is interfered with as in blindness, the eyes will, of course, not be able to follow the finger as the result of a visual impression

A voluntary movement is the result of a stimulation of a motor center The question arises whether in a normal individual a pure voluntary impulse is possible without a previous sensory stimulation, the term sensory stimulation being used here in its broadest sense When we will to move the eyes independently of any immediate sensory stimulus, as when in meditation, there is at least a psychic stimulus to the cortical oculomotor center (that is, the center for the movements of the eyeballs), this stimulus may come, for example, from the higher psychic areas of the prefrontal lobe, but it is intimately dependent on stored impressions at one time or another received or accumulated by means of sensory mechanism, and moreover in the act of using the eyes in such circumstances as when one wills to read a book or to look at the stars, sensory impression takes part in the lateral and upward movements It is probable, therefore, that a centrally initiated voluntary impulse is dependent on the functioning of a central reflex arc, and that any interference with this would cause deviation.

Summing up the views so far advanced, it is my opinion that the movements of the head and eyes are dependent on a most complex mechanism, that there is only one true or at least functionally important cortical motor center anterior to the central fissure, that this motor center is in immediate connection with the sensory portions of the brain, that whenever the head and eyes are moved it is the result of a sensory stimulation, and that any interference with the sensory-motor arc will cause impairment of this function Let us now consider in order the embryologic, anatomic, physiologic and pathologic evidence in support of these views

EVIDENCE IN SUPPORT OF VIEWS

The well-known myelogenetic investigations of Flechsig[8] support these views According to him, in his primordial zones or regions of early development are included exclusively projection fibers, sensory and motor, or, as he terms them, corticopetal and corticofugal He believes that for every sensory path there is a corresponding motor path. In the primordial zones are included the motor and sensory regions, the visual or occipital lobes, the auditory or upper temporal regions and the olfactory and gustatory centers principally in the anterior temporal region The myelogenetic differences between the primordial and the intermediate and terminal zones, according to Flechsig, are the result of successive development of different sense organs and their motor or centrifugal paths, and the development of long and short association systems

In the main these views have received physiologic and pathologic confirmation What appears to be the view of Flechsig that each primordial area is both sensory and motor can not be altogether agreed with, but it must be recalled that his views are only relative, for in his myelogenetic area No 1, which corresponds with some closeness to the central convolutions, the tactile radiation is distributed mostly to the postcentral convolution, while the tract which is undoubtedly motor originates from the precentral convolution This would argue for separate cortical representation for motor and sensory functions, and would accord with our present views

With the auditory or cochlear myelogenetic area in the first temporal convolution Flechsig finds a corticofugal radiation, which he believes may be motor, although this has not as yet been demonstrated The cells and fibers which constitute this radiation lie at the lower border of the first temporal and in the furrow which separates it from the second temporal convolution He assumes that motion of the head and of the body following an auditory impression may be performed through the intermediation of corticofugal fibers which originate in or near this center Similarly, Flechsig reasons that movements of the eyes and of the head consequent to visual stimulation are due to the intermediation of corticofugal fibers from or near the visual zone Motion as a consequence to olfactory stimulation can likewise be explained

According, then, to Flechsig's view, a movement of the eyes or of the head is the result of a sensory stimulation and may be due to an auditory, visual or other sensorial impression coming by way of the corticofugal fibers which originate in these centers I do not agree, however, with the view that the corticofugal fibers coming from the special sense centers are purely motor projection fibers, as Flechsig appears to believe Undoubtedly the corticofugal radiations associated with the corticopetal radiations in Flechsig's myelogenetic area No 1, which corresponds to the sensory and the motor centers around the central fissure, are purely motor The corticofugal radiations of the primary auditory and visual zones are probably not purely motor projection fibers but in large part are fibers which connect these special sense areas with the oculomotor centers in the main motor region A sudden auditory stimulation will of course, cause immediate turning of the head and

8 Flechsig "Gehirn und Seele Leipzig 1896.

eyes, but this is not because, or at least not usually because, a motor impression is transmitted by the corticofugal fibers directly from the auditory center to the nuclei which are concerned with the muscles necessary to perform that function, but rather because the auditory impression is transmitted by means of association fibers to the motor cortex and thence to the basal nuclei

When an auditory impulse is received in the temporal convolution it may be stored up in the auditory memory center, it may be transmitted to the visual center and recall visual images associated with the sound produced, it may cause olfactory or gustatory stimulation or it may cause the movement of almost any portion of the body as the person wills In the performance of all these possible functions it is necessary to have the auditory center in direct communication with the other sensory centers, and this is accomplished by means of associated fibers, the existence of which have been repeatedly demonstrated, similarly the visual centers are likewise in association with other centers

Mills[9] believes that each sensory area has its motor correlative and that each of these has its separate cortical representation He speaks of a sensory motor, visual motor, auditory motor, gustatory motor, olfactory motor and a possible equilibratory motor area According to Mills, this conception does not do away with the importance of our old-time motor area, which still remains the great or main motor region His view is that at least in the highly developed human being the centers for movements of the head and eyes and for other movements have largely taken the place of the motor projection fibers which exist in, or in close contiguity with, each of the special sense areas, in other words, the visual motor area, auditory motor area, olfactory motor area and gustatory motor area are largely, although probably not altogether, in abeyance in movement, although still retaining their importance to a greater or less degree in the animal scale below man If this be the case, the arguments brought forward in this paper which are based on the idea of a single active functioning region for movements of the head and eyes are valid, in other words, we can disregard all cortical motor areas except those which lie in front of the central fissure

Experimental investigations also confirm my views, for it has been shown that electrical excitation of any portion of the brain, if of sufficient intensity, is productive of movements of the head and eyes Four principal areas have been found in the brain of lower animals in which electrical stimulation will produce these movements in the frontal lobe, in the so-called neck or head region, in the angular gyrus and in the occipital lobe Partly because of the fact that stimulation of the posterior portion of the second and third frontal convolutions and the region near the angular gyrus is always productive of movements of the head and eyes, these two areas have been considered by various authors as the motor centers for these functions

Landouzy[10] and Wernicke[11] were among the first to favor the area near the angular gyrus or the *pli courbi* of the French The physiologic experiments of Luciani and Tamburini,[12] Ferrier,[13] Munk[14] and Obregia[15] supported their views, for stimulation of this region constantly caused deviation of the eyes and head Against this view, however, were the extirpation experiments of Brown and Schäfer[16] on the brains of apes in which conjugate deviation was not obtained. Again Flechsig has shown that this area contains few projection fibers It is probable that electrical stimulation of the occipital and parietal regions causes deviation of the eyes and head, not because of a motor center in these areas but because of stimulation of the visual and auditory fibers, respectively It has been shown that underneath the angular gyrus lie the fibers from the occipital and auditory lobes, and it is because of the combined involvement of these that any stimulation or lesion of this area causes such constant deviation of the head and eyes

The work of Ferrier,[13] Mott and Schafer,[17] Beevor and Horsley,[18] and lately of Sherrington,[19] has conclusively proved the existence of an oculomotor center in the posterior portion of the second and third frontal convolutions The existence of a separate center for the movement of the head, for the eyes and a combined center for the movement of the head and eyes has been repeatedly shown in lower animals, and it is probable that such differentiation also exists in man Beevor and Horsley[18] in apes (*Macacus sinicus*) found an isolated center for movement of the head, for the eyes and for the head and eyes in the posterior portion of the first, third and second frontal convolutions, respectively Later these authors found in an orang-outang, in the precentral convolution, underneath the hand region, a center in which irritation caused deviation of the head and eyes, and, on the other side of the brain, deviation of the eyes alone because of irritation of the foot of the second frontal convolution

A critical study of the evidence furnished by the physiologic experiments in lower animals favors the view that there is a separate center for the movement of the eyes in the foot of the second frontal convolution, that a separate center for the movement of the head exists in the lower part of the precentral convolution along its anterior edge, and that further stimulation of either area may cause a combined deviation of the head and eyes

Normally, the head and eyes are moved together more often than separately, and the eyes more than the head in separate movement We should expect, therefore, from developmental and physiologic reasons, that the oculomotor center should be better developed than the head center, and that stimulation of the head center should more often give conjugate movement of the head and eyes than stimulation of the eye center This is proved by the experiments of Beevor and Horsley,[18] Ferrier[13] and Mott[17] The experiments of Sterling[20] are of extreme interest in this connection This author irritated the so-called neck region in young animals and found that he could obtain movements of the head alone in dogs 8 days old, whereas associated movements with the eyes could not be obtained until the twenty-first day He did not perform the converse experiment by irritating the ocular centers alone, which would be interesting We can, however, argue from this that separate centers for the eyes and head exist, and that because of association between them irritation of one may cause

9 Mills Brain" 1889 and Univ of Penna Med. Bulletin, May 1904
10 Landouzy Thèse de Paris 1876.
11 Wernicke Arch f Psychiatrie 1888 vol. xx, p 247
12. Luciani and Tamburini See Klaas Dissertation, Marburg, 1878
13 Ferrier Hirnlocalisation" 1890 Leipzig and Vienna.
14 Munk Sitzungsberichte der Kgl akad. der Wissenschaften zu Berlin 1890
15 Obregia Archiv f. Anat. u. Physiol., 1890 p 260
16. Brown and Schäfer Phil Trans. Royal Society of London 1888
17 Mott and Schäfer "Brain" 1890
18. Beevor and Horsley Phil Trans., Royal Society of London vol. clxxxi, 1890 p. 129
19 Sherrington Journ Phys., 1894
20 Sterling Arch. f Anat. u. Physiol., Phys 1891

movement of both It is also for this reason that irritation of other portions of the brain besides the motor, cause in most instances combined movement of the eyes and head

Our knowledge of the direction of the movements of the eyes and of the head is chiefly in regard to lateral deviation Reasoning from analogy, we should expect a separate center for upward and downward movement, as well as for lateral movement The experiments of Mott[17] proved that this exists in lower animals By irritating, in apes, the posterior portion of the frontal convolution he obtained movement of the eyes in a horizontal direction, to the opposite side and upwards, and to the opposite side and downwards, the points irritated lying from the median to the lateral side, laterally, on the outer side and in the median portion, respectively A similar order was present for the movement of the head Schafer was enabled to obtain somewhat similar results by stimulating different parts of the occipital lobe

Permanent paralysis of upward or downward associated ocular movement is only rarely observed clinically, and, as Spiller has shown, is probably due to lesions near the oculomotor nucleus In pathologic conjugate deviation of the eyes the deviation is sometimes laterally and upward or downward, as in Case 7 of my series, but I know of no reported case in which the conjugate deviation of the eyes was purely either in an upward or downward direction There are several physiologic reasons for this In the first place, lateral movements of the eyes are better developed than upward movement but perhaps no better than downward movement There is still another important factor One side of the brain controls movements of the eyes and head in the opposing direction, the tendency for deviation would, therefore naturally be in a lateral direction This was well shown in the experiment of Mills,[9] who faradized in man the head center and obtained deviation of the head to the opposite side

The functions of convergence and divergence are considered by the majority of authors as reflex phenomena with possibly basal centers This I believe, however, to be an error I am of the opinion that they are as much muscular movements and dependent on a similar mechanism as either lateral, upward or downward associated ocular movement In convergence the internal recti muscles of either side are used, while in divergence the external recti are called into action Should, for instance, an internal rectus be paralyzed, the corresponding eye will not be able to converge This can be compared to failure of associated lateral movement of one eye, if the external rectus is paralyzed

If we believe, as no one doubts, that there is a connection between the external rectus muscle of one side with the internal rectus of the other by means of the posterior longitudinal bundle, and if, as Spiller believes there is a similar tract connecting the nuclei of the superior rectus and inferior oblique muscles of one side with the corresponding nuclei of the other side, and if this bundle is concerned with upward movement, and if there is another tract for downward associated ocular movement, why should not there be a similar tract connecting the internal recti nuclei and another connecting the nuclei of the external recti, these having to do with convergence and divergence?

It is true that the existence of such tracts has not been demonstrated, but neither have the tracts which are supposed to be concerned with upward and downward movement There are, however, clinical facts which support this view In the majority of cases of paralysis of associated ocular movement due to pontile lesions, either convergence or divergence is lost In the statistics collected by Spiller, of 47 cases, the condition of convergence was noted in 26 Of these, convergence was impaired in 15 cases, and in 9, normal or nearly normal In most of the cases in which convergence was said to be normal, the observations were made some time before death and this function might well have been lost later

It is more than probable that convergence and divergence have also cortical representation and that this is in the posterior portion of the second and third frontal convolutions This subject will be fully discussed in a subsequent paper on paralysis of associated ocular movements due to basal lesions

Let us now consider the pathologic evidence Conjugate deviation of the head and eyes may occur as a result of lesions causing hemiplegia, in tumors of various localities, in areas of softening, in meningitis, in epilepsy, in fact, it can be shown that any lesion in any portion of the brain may cause deviation Consider, for instance, the statistics collected by Grasset[21] Of 104 cases, 48 with necropsy, in 2, lesions were shown in the frontal lobe, in 10, in the frontal and other areas, in 25, in the internal capsule and cerebral peduncles, and in 11 the lesions were diffuse

In the 16 cases with necropsy reported in this paper, lesions were found in almost every portion of the brain In Case 1 an area of softening was found in the frontal lobe In Cases 3 and 4 there were diffuse cortical hemorrhages in the frontal, parietal and occipital lobes In Case 5 a hemorrhage was found directly in the angular gyrus In Case 6 a hemorrhage was found in the occipital lobe and an area of softening in the precentral convolution In Case 7 (Fig 1) a large fibrosarcoma occupied the whole of the occipital lobe In Case 8 there was a thrombosis of the middle cerebral artery In Cases 9 10 and 11 there were hemorrhages in the posterior limb of the internal capsule and the neighboring parts In Cases 12, 13 and 14 there were lesions in the lenticular nucleus and external capsule In Case 15 there was a lesion of the lenticular nucleus alone In Case 16 (Fig 2) there was an area of softening involving the anterior limb of the internal capsule and lenticular nucleus, with a fresh hemorrhage underneath the angular gyrus Besides in Cases 14 and 15, in which no fresh hemorrhages were found there was dilatation of the lateral ventricles

If we consider more minutely the location of the lesions causing conjugate deviation, we find three principal areas involved 1 The frontal area 2 The area of the angular gyrus 3 The internal capsule We can still further subdivide these regions In the frontal areas there are recorded cases of lesions involving the posterior part of the second (Sahli,[22] Drummond[23] and Oppenheim[24]) and others of the posterior part of the second and third frontal convolutions (Klaas,[25] Case 4 of my series and others) Besides, there are a large number of recorded cases of lesions involving the posterior portion of the second and third frontal convolutions, the adjacent precentral convolutions and other areas, as in the cases collected by Muller[26] and Klaas[25]

21 Grasset Des Localisationes dans les Maladies Cérébrales Montpelier Paris 1880 pp 215 to 238
22 Sahli Deutsch Arch f klin Med vol lxxxvi No 1 3, p 1
23 Drummond Lancet 1887
24 Oppenheim Charité Annalen 1895
25 Klaas Inaug Diss Marburg 1898
26 Müller Deutsch Zeitschr f Nervenhlk 1902 vol xxii p 5

The important factor is that in all of these cases the posterior portion of either the second or third frontal convolutions or the adjacent part of the precentral convolution was involved

Of the lesions in the region of the angular gyrus may be included any lesion in or near this area Whatever in this region causes conjugate deviation must cause interruption of the fibers underneath the angular gyrus If the lesion is posterior to this point, as in Case 6, there is only an interruption of the fibers from the occipital lobe If the lesion is directly in the angular gyrus or beneath it, as in Cases 5, 12, 13 and 14, there is an interruption of the fibers both from the occipital and temporal lobes In every one of these cases the lesions extended underneath the cortex and must have involved the fibers coming from both these lobes

In the lesions involving the internal capsule, a differentiation can be made between those involving the anterior limb and those involving the posterior limb In the former the projection fibers from the frontal lobes are involved, while in the latter there may be an involvement of the motor, sensory or optic fibers It is the opinion of some French writers, notably Bard,[1] that to cause deviation there must always be an involvement of the optic radiations This, however, is not correct, as in most of the recorded cases, also in mine there was no such involvement

From the pathologic evidence, therefore, the conclusion must be drawn that lesions involving the posterior portions of the second and third frontal convolutions and the adjacent precentral convolution cause conjugate deviation of the eyes and head, and that when lesions elsewhere in the brain produce conjugate deviation there is an interruption either of the projection fibers in or near the internal capsule or of the association fibers between the occipital and temporal cortex and the frontal lobe

Consider now the pathologic evidence regarding the oculomotor center in the frontal lobe It is the opinion of some, as of Sahli,[22] that in man there is no evidence that a separate center for the movement of the head and eyes exists Muller,[26] on the contrary, believes that there are separate centers for these functions, and he places both in the posterior portion of the second frontal convolution, the center for movement of the head being in the under portion and that for the eyes in the upper portion of this convolution From the pathologic evidence at hand, no one doubts the existence of the oculomotor center in the posterior portion of the second and probably the third frontal convolution The principal reason why lesions of this area cause deviation also of the head is because the head center is so intimately associated with the oculomotor center that an irritation or lesion of one will most likely cause involvement of the other

That a separate center exists for the movement of the head was beautifully shown in the faradization experiment of Mills[9] in man, in which a faradic irritation in the lower precentral convolution caused movement of the head alone to the opposite side This is proven also in Case 6 in which an area of cortical softening was found in the lower precentral convolution causing Jacksonian convulsions limited to the face and partly to the hand and also causing deviation of the head to the other side but the eyes were not moved Therefore the center for movement of the head in the lower part of the precentral convolution should be placed below and probably a little forward of the hand center

It is more than probable that the cortical oculomotor center in the posterior portion of the second and third frontal convolutions is subdivided for lateral and upward and downward movements According to Parinaud,[27] the center for upward movement is in the lowest portion of this area, for downward movement in the upper, and for lateral movement in the median portion

Mills and Frazier[28] obtained forward movement of the head by irritating the anterior portion of the head center in the precentral convolution In another case in which the records have been lost, Dr Mills distinctly remembers obtaining upward movement of the eyes alone This most important evidence proves that cortical centers for upward and downward movements for the head and for the eyes exist. It is also probable that a separate center exists for the combined movements of the head and eyes, and this center is probably between the individual head and eye centers This center may also be subdivided for lateral and upward and downward movements

DIAGNOSTIC VALUE OF CONJUGATE DEVIATION

So far we have not considered conjugate deviation in a clinical sense, or its value in diagnosis Conjugate deviation of the eyes and head occurs most often in hemiplegia, and its occurrence is considered an unfavorable sign, as most such cases end fatally Also it is most always accompanied by unconsciousness Indeed, Grasset believes that it always is The conjugate deviation involves mostly the head and eyes together but it rarely involves the eyes alone, as in Cases 4, 12 13, 14, 15, and in exceptional cases the head alone as in Case 6 More rarely still, the deviation of the head is in one direction and the eyes in the other as in Case 1 The only similar cases recorded are by Roussy and Gauckler,[29] Dufour (cited by Roussy and Gauckler [9]) one case of Prevost's (cited by Grasset[21]) and a case of Gaussel [30]

The deviation is never permanent and, as a rule, does not persist longer than two or three weeks and in most cases about a week The deviation of the head is not so persistent as that of the eyes and is the first to disappear At times, instead of there being a complete deviation there are jerking movements of the eyes, these being mostly in a lateral direction, but occasionally as in Case 13 they are in a lateral and upward direction The jerking movements of the eyeballs are always from the median line to the external canthus and never in the whole range of movement These nystagmoid movements must be differentiated from the violent jerkings seen in the course of a convulsion, these lasting only during the convulsion and always being to the opposite side of the lesion, whereas in the other conditions the jerkings may be to either side depending on the nature of the lesion

Prevost[31] first showed that deviation is toward the lesions when the lesion is cerebral and away from the lesion when it is in the isthmus Some years later Landouzy[10] advanced the view that irritation and paralysis caused deviation in opposite directions when the lesion was in the cerebrum the patient looking at the lesion when it is a paralyzing one and at the paralyzed limb when it is of an irritating nature Grasset[21] later showed that the opposite was true in lesions of the brain stem

[27] Parinaud Arch de Neurol vol v No 14 1883
[28] Mills and Frazier Univ of Penn Med Bulletin July August 1905
[29] Roussy and Gauckler Le Neurol 1904 p 765
[30] Gaussel Semaine Médicale May 18 1904
[31] Prevost These de Paris 1883

The above facts have been repeatedly demonstrated It must be remembered, however, that the same lesion may at different times cause paralyzing or irritating symptoms

Wernicke[11] first advanced the view that the rapid disappearance of the conjugate deviation of the head and eyes was owing to the partial control of these movements by the cerebral hemisphere of the sound side and to the action of its oculomotor and head centers It is also because of the action of the oculomotor center in the unimpaired hemisphere that conjugate deviation can be most readily explained If one oculomotor center or the fibers in association with it are injured or destroyed they cease to perform their function, at least for a time, therefore, the center in the sound hemisphere causes the deviation to the opposite side, which would cause the eyes to look at the lesion In irritative lesions as in tumors this rule is reversed because as in experimental investigations irritation of one side causes movement to the opposite side

In those cases in which the deviation of the eyes alone, or of the head, occurs, it must be that their respective centers or their associated fibers are separately involved Similarly, in those rare instances in which the head and the eyes are deviated in separate directions, there must be an irritating lesion acting on one center and a paralyzing one on the other These clinical facts also argue for separate cortical centers for the eyes and the head

If we compare the pathologic lesions causing conjugate deviation with others in which no deviation occurs, as, for instance, in a hemorrhage which causes hemiplegia, we may find a most remarkable similarity in their location and extent Naturally the question arises, why should conjugate deviation occur as a result of one lesion and not of another? As a matter of fact, to a certain extent, this does happen in every case, only in some the symptoms are more marked The deviation in other words is of minor or partial degree, but nevertheless real Leichtenstern and Hunnius (cited by Klaas[32]) have shown that in cases of brain apoplexy in which no deviation occurred there was difficulty in looking to the side opposite the lesion, while the patient could easily look to the side of the lesion This fact has caused Brissaud and Pechin[33] to call this symptom an "ocular hemiplegia," an excellent term. It may be that conjugate deviation only occurs when the lesion is large and the patient unconscious, or it may argue according to some, that there is a special tract concerned with conjugate deviation the existence of which, however, has not been demonstrated

In 1904 Bard[1] gave a new impetus to the study of conjugate deviation of the head and eyes He then advanced the view that in the greater number of hemiplegies with conjugate deviation we have present a more or less degree of lateral homonymous hemianopsia, and it is because of an active movement subconsciously commanded by the sensory-motor centers of the sound side that the patient turns the head and eyes of the sound side to regard that which he sees Bard also says

The exterior excitations produced by reflexes are not indispensable the fact that because of the suspension of activities of the one hemisphere, the spontaneous evocation of the sensorial images has not always no part there, is capable of causing the lateral deviation and it is without doubt for this reason that these sometimes persist, just as they may appear during sleep

33 Brissaud and Pechin Rev Neurol, 1904 p. 638.

Bard also elsewhere says that the sense of sight plays the predominating rôle in conjugate deviation of the eyes and head His view has been supported by Dufour,[29] but denied by Grasset[4] The case of Dejerine and Roussy[5] effectively disproves the views of Bard,[1] for in this patient in whom conjugate deviation occurred there was blindness from birth, showing that there need not be hemianopsia in association with conjugate deviation, contrary to the views of Dufour[29] and Grasset[4] who believe that hemianopsia is a most frequent symptom This I also believe to be an error In most of the cases here recorded it was not possible to demonstrate hemianopsia, in fact, it was only possible to do this in three

There is still another source of error In many instances following an apoplectic attack there seems to be what clinically can be more or less satisfactorily demonstrated as a homonymous hemianopsia, but at necropsy the lesion does not involve the optic radiations This hemianopsia may be transient, and may be demonstrated only for a day or so, or may remain longer, and can be likened to the temporary hemianesthesia so often seen in capsular lesions In other words, it is my view that many of the hemianopsias demonstrated in these cases are only temporary symptoms and are due either to shock of the hemorrhage or to a fleeting injury of the optic radiations, and that this hemianopsia is the result of the lesion as much as the conjugate deviation and not the cause of the latter

This is well demonstrated in Case 16 When the patient was examined by Dr McConnell and myself she had, besides a right hemiplegia, a deviation of the head and eyes to the left She could look to the left and upward and downward, but could not look to the right past the median line In testing her with the hand or with the feeding cup a homonymous right, lateral hemianopsia was repeatedly demonstrated This was not obtained the following day At necropsy an area of red softening was found involving the anterior portion of the left lenticular nucleus and the caudate nucleus, and a small hemorrhage was found just underneath the left angular gyrus The optic radiations or the posterior limb of the internal capsule were in no way affected (Fig 2) The hemianopsia was undoubtedly the result of shock, although the patient was fairly conscious and could obey commands

To a certain extent hemianopsia does influence the associated movements of the eyeballs, but it probably has no effect whatever in producing conjugate deviation It is well known that in cases of hemianopsia, whether of peripheral or central origin, the patients have a tendency to deviate their heads but here, instead of the head being deviated to the side in which one sees, the patient deviates the head to the hemianopic side because he desires to bring into use the part of the retina which is not diseased

There is still another factor If a patient has a hemianopsia of any duration he soon learns that he can not look to that side, and in a short time he will accustom himself not to deviate his eyes in that direction If such a patient were to be suddenly asked to look in the direction of the hemianopsia, he would not be able to deviate his eyes immediately, or to deviate them so promptly as toward the sound side This I was able to demonstrate in two cases of hemianopsia due to a basal syphilitic lesion, and in one case was able to judge from this symptom on which side the hemianopsia existed

In Case 7 paralysis of associated ocular movement

existed to the hemianopic side, and this persisted until almost the time of death, for several months This patient had a large fibrosarcomatous tumor, as shown in photograph (Fig 1), which occupied the whole of one occipital lobe This patient had first scintillating scotoma, then hemianopsia, hemianesthesia and hemiplegia The paralysis of lateral associated ocular movement was not complete, and in this case was probably due to the hemianopsia

During the active stage of conjugate movement of the eyes the patient can very easily rotate the eyes toward the side of the lesion, and also upward and downward, but in most cases can not deviate them toward the sound side This paralysis of associated ocular movement is only relative and depends on the conjugate deviation It is, of course, only temporary

Irregular or ataxic movements of the eyeballs have been recorded as a result of lesions of the frontal lobe Thus in a case of Dercum,[34] of trauma to the frontal lobe, ataxic movements were present, as were also in a similar case of Klien's[35] These symptoms, however, alone are not diagnostic, but may be valuable when accompanied by other symptoms

CONCLUSIONS

The following conclusions can be drawn as a result of the studies in this paper

1 Conjugate deviation of the eyes and of the head is dependent on a most complex mechanism

2 In the human being there is but one oculomotor center, or at least one active functionating center situated in the posterior portion of the second and third frontal convolutions, adjacent to the precentral convolutions

3 A separate center exists for the movements of the head, probably in the lower anterior portion of the precentral convolution

4 There is probably in man a distinct center for the combined movements of the eyes and head, situated in the area between the head and the eye centers

5 It is probable that the cortical oculomotor, head and combined head and eye centers are subdivided for lateral as well as for upward and downward movements

6 The oculomotor and the motor head centers are in connection by means of association fibers with the cortical centers for the special senses, in the temporal, occipital, uncinate and other lobes

7 Any lesion in the motor centers for the eyes and head or in the related special sense centers or in the association fibers connecting the former with the latter will cause an impairment in voluntary deviation of the eyes or of the head, or of both, this depending on the nature and location of the lesion

8 Lesions in the angular gyrus cause conjugate deviation because of involvement of visual and auditory fibers which lie underneath this area

9 The theory of Bard[1] that conjugate deviation of the eyes and head is always or nearly always accompanied by homonymous lateral hemianopsia and dependent on this is an error, for in the majority of instances hemianopsia does not exist

10 Hemianopsia may be caused by the shock or transient effects of the hemorrhage, this loss of half vision being only a temporary symptom and similar in nature to the temporary hemianesthesias sometimes observed in capsular lesions

11 The occurrence of conjugate deviation of the eyes or of the head, or of both, is of no value as a focalizing symptom, because it may be the result of a lesion in any portion of the cerebrum It may be of value, however, in conjunction with other localizing symptoms

12 Conjugate deviation of the eyes and head probably occurs in every case of large apoplectic lesions, but in some instances it is a partial or minor form and of transient duration

13 Paralysis or impairment of associated ocular movement may occur as a result of a hemianopsia This, however is only temporary

14 There is at present no evidence of a center or centers for automatic ocular movements but if such centers exist in the thalamus a lesion of these should cause forced or incoördinate ocular movements

15 Convergence and divergence are probably not reflex acts, but associated ocular movements similar to lateral and upward movements They probably have cortical centers in the posterior portion of the second and third frontal convolutions The movements of convergence and divergence are probably brought about by associating tracts in the pons and cerebral peduncles

(To be continued)

34 Dercum Jour Nervous and Mental Dis. Feb 1905
35 Klien Deut. Ztschr f. Nervenheilk., vol xxvi, 1904 p 327

THE RELATION OF EYE-STRAIN TO CHRONIC HEADACHES *

S W S TOMS
NYACK, N Y

There is no one symptom so frequently complained of to the general practitioner as that of headache It is the burden of suffering of civilized peoples It is heard in connection with almost every case of impaired health, functional or organic

The etiology of it we, as physicians, should most persistently endeavor to determine in each case The late Dr E C Seguin said "The thorough study of a case of headache is one of the most difficult problems of medicine," and Alfred L Loomis designated it as a "symptom of exceedingly difficult interpretation"

The reflex headaches or neuralgias due to essential eye strain comprise the greater percentage of all cases met with I have the records of over 1,280 eye examinations that justifies me in stating 90 per cent of all those complaining of this distressing malady had ocular defects

These examinations—most of which were made as part of routine work—one-half, or over 600, revealed ocular defects that were never surmised by the patients themselves, and many of them were exceedingly skeptical of the suspected cause inasmuch as they could not directly attribute subjectively, the cause to their eyes their vision being apparently good for all distances and conditions of light or work Over 80 per cent of the 1,280 cases had some form of headache, periodical and chronic, 15 per cent had typical migraine Only 5 per cent had discoverable organic lesions that possibly intensified or was partly to blame for the head pains Of these, one-half of 1 per cent had some form of chronic nephritis (diagnosed or suspected by appearance of the eye grounds) A few cases of diabetes mellitus and three cases of brain tumor were recognized by the ophthalmoscope One-fourth of 1 per cent had absolutely emmetropic eyes, but with muscular anomalies Twenty

* This article was prepared to be read [illegible] Section on Practice of Medicine of the American Medical [illegible] June 1906.

per cent had gastrointestinal or hepatic functional derangements, the resulting toxic anemia being coincidently relieved or greatly benefited after the ocular reflexes were corrected Fully 50 per cent of the sufferers had but slight refractive errors or muscular imbalance contrary to the statements of authorities who teach generally that anything under one diopter of refraction may be ignored and left uncorrected when the vision is 20/20 or better It is in these cases where ciliary spasm is the direct factor in causing headaches in people whose occupation is for near work—accommodative asthenopia results because of the inability of the ciliary muscle to compensate for the constant and excessive demand for innervation in focusing for near-by objects

In the "sick" or "bilious headaches" 10 per cent of the cases met with existed in women at the menopause or were complicated by pelvic disorders loose kidneys and lax abdominal walls Ten per cent had intranasal diseases Of those who were relieved of their headaches 75 per cent had no other treatment than properly adjusted glasses or appropriate treatment for their muscular anomalies About 20 per cent partially helped or not relieved refused ocular treatment or disregarded advice in the wearing of glasses or for other personal considerations Dr Gould has given sixty-eight reasons why glasses do not relieve [1]

There are three etiological factors in eye-strain why people viz

1 Errors of refraction
2 Errors of accommodation
3 Errors of muscular balance

There is nothing especially characteristic in headaches due to eye-strain—except perhaps it is that the subject rarely suspects it being due to that cause The types mostly met with are the occipito-cervical frontotemporal and the hemicranias Apparently no relationship exists between the severity of the pain and the amount of ocular defect present

Dr G Martin (Paris) reported in 1888 [1] 359 cases of migraine due to the lower grade of ocular defects and I have never met a case of migraine in a subject with normal eyes many of them have been relieved solely by ocular therapeutics The symptomatology can best be given by relating the history of a typical case

Mrs M T aged 32 married father and mother both suffered from headaches up to 40 years of age A maternal aunt also had headaches Patient had malaria fever for some months many years ago No return since She is married and has had three children and three miscarriages with no history of complications Her present physical condition seems only fair She is 'run down" anemic and has a look of distress Physical examination of chest negative abdomen reveals a right floating kidney pelvic organs negative Nose throat and ears negative She complains of belching "sour stomach" pains in the back of head and behind the ears Bowels and catamenia are both regular She has been suffering from periodical attacks of sudden blindness vertigo palpitation of the heart dyspnea extreme nervousness numbness of the left arm which rapidly involves the entire left side and finally the whole body with loss of consciousness follows A severe and blinding headache precedes or accompanies these symptoms Sometimes it is ushered in by a chill There is always coldness of the extremities a cold sweat or a rush of blood to the head nausea occurs usually—rarely vomiting She suffers from constant pain in the forehead mostly over the left brow These attacks recur from one to three times in each month are worse at the menstrual period and usually last all day gradually passing off after lying down and getting to sleep They often leave the patient weak for two or three days afterwards She came to me June 10 1905 I found she had a moderate degree of compound hyperopic astigmatism which was corrected by glasses She had been a sufferer since marriage for over ten years On December 9, last, she reported she has never had a "spell" since she put on the glasses, has gained 25 pounds and "never felt as well before" in her life Her kidney has not received any mechanical or other treatment

Frequently eyes with considerable visual defects produce no symptoms of eye-strain, while the normal balance of health is maintained and there is no excessive demand on the nervous reserve, but let a sickness develop or a period of mental stress ensue, then these eyes, or rather, the nervous system is no longer capable of sustaining or compensating for the refractive errors, and functional derangements become manifest It is more so with muscular anomalies Our brain intends the eyes to perceive and sustain binocular single vision Images should fall equally on the maculæ of both eyes The brain will not tolerate diplopia although it frequently will astigmatism for long periods

One other condition of the eyes that is not uncommon, yet I am sure, is not recognized as frequently as its importance demands is that of subnormal accommodation or premature presbyopia in young subjects It is productive of most alarming nervous symptoms of headache and particularly of insomnia These subjects often have very acute vision for distance with a slight muscular trouble of exophoria or esophoria which is often a misleading condition They refuse all distance lenses or prisms, but find immediate relief when a presbyopic correction is made

In conclusion I can not do better than quote from Dr Myles Standish's paper [2] in which he says "Every ophthalmologist knows full well that eye-strain should be spoken of, not as the sole cause of the various nervous depressions which follow but as the precipitating cause

The result is entirely dependent on the man behind the eyes if his nervous equilibrium is such that it is easily disturbed, or if his power of resistance to nervous irritation is diminished, then there follows some functional nervous disturbance which exhibits itself at the point where the individual with the greatest difficulty maintains peaceful activity so to speak One man has headaches another has muscular twitchings, another has dyspeptic symptoms and so on"

1 Am Med July 4 1903

RESULTS OF THE EXAMINATION OF STUDENTS' EYES

IN THE DEPARTMENT OF PHYSICAL EDUCATION, UNIVERSITY OF PENNSYLVANIA *

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AND

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PHILADELPHIA

The present report is based on the examinations made of students eyes during the college year of 1905 06 Eight hundred and eighty-three students were examined, and as the tests were conducted with great care and thor-

2 Read before the Boston Society for Medical Improvement Dec. 17 1904 Boston Med & Surg Jour Feb 23 1905

* Read before the Philadelphia County Medical Society Oct 10 1906

1 The position of ophthalmologist to the Department of Physical Education at the university was held by Dr M W Ziegler from 1897 until 1901 the present incumbent Dr Posey being appointed in 1901

oughness, and were supplementary to an equally exhaustive study of the entire physical condition of each student, it was thought that an analysis of the results might be of value, not only to ophthalmologists, but to educators also, and even to the public at large While some may question the desirability of making exercise and care of the body part of a university course, no one can criticise the endeavor to ascertain the ocular defects of the student and the expediency of correcting any existing errors of refraction

Such tests have been practiced at the University of Pennsylvania since 1897, but until 1904, when the completion of the gymnasium rendered the examination of a very large body of students practicable, the tests were confined to members of the college department.

Conforming to the plan which has been adopted in the examination of the general physical condition of the students, the tests of the ocular condition were made in the autumn It is planned, however, to submit students to a second test in the spring just before graduation, for the purpose of ascertaining the effect which four years of university life may have had on the ocular condition Thus all the students have the privilege of a careful and accurate test of their ocular conditions and advice as to the best means to preserve or improve this faculty—an inestimable advantage to men who depend continually on the normal functioning of the eyes for health, comfort and efficiency

As the proper examination of the eyes of 800 and more students is a task of great magnitude, the ophthalmologist of the department enlisted the services of nine physicians, all trained ophthalmologists, and his assistants in various hospital services, in the performance of the various tests The names of these, to whom he is indebted for the zeal and accuracy with which they performed their duties with their various hospital connections are as follows

Walton C Swindells, M D, Associate in Ophthalmology in the Philadelphia Polyclinic

Jay C Knipe, M D Chief of the Ophthalmological Clinic of the Howard Hospital

Frank C Parker, M D, Assistant Surgeon of the Wills Eye Hospital

Frederick Krauss, M D, Ophthalmologist to St Christopher s Hospital

Alfred Cramer, M D, Clinical Assistant to the Wills Eye Hospital

John A Colgan, M D, Clinical Assistant in the Ophthalmological Department of Howard Hospital

Aaron Bray, M D, Clinical Assistant in Wills Eye Hospital and Howard Hospital

Mortimer Herzberg M D Clinical Assistant to the Ophthalmological Department of the Polyclinic Hospital

James A Kearney, M D, former Resident Physician in the Wills Eye Hospital

With the various classes divided into squads, these gentlemen prepared a short sketch of the ocular history of each student, questions being asked regarding the existence of any known visual defect, headaches ocular pain or fatigue after studying or other symptoms which might be of ocular origin Special inquiry was made regarding the wearing of glasses of the date at which the eyes were last examined and the name of the physician or optician who made the tests After these facts had been recorded on a card prepared for the purpose and arranged for subsequent filing the student passed to another assistant who determined the range of accommodation and the degree of visual acuity in each eye separately by the Snellen type Another examiner then noted the external configuration of the eyes and the presence of any inflammatory condition or anomaly in their movements On the completion of these tests the student entered a dark room, where the exact degree of muscular insufficiency was recorded by means of the phorometer, while at another light the ophthalmologist to the department carefully estimated, with the ophthalmoscope, the state of the refraction and studied the condition of the interior of each eye

With the results of all these tests, and the histories carefully recorded on the filing cards just referred to, the ophthalmologist at his leisure carefully considered the ocular condition of each student and mailed to each the result of the test, and, in the event of the eyes being defective, his advice regarding further procedure Thus if the vision was discovered to be far below normal in either eye, or headache or other symptoms of eye strain were complained of, an immediate test for glasses by a competent oculist was advised If, on the other hand vision was found to be but slightly defective refraction was advocated to be done during the holidays, so that the college work might not be interrupted If the tests showed normal vision and healthy eyes the student was also informed and his ocular condition pronounced to be satisfactory

In these examinations a very large number of defective eyes were discovered in students who were either ignorant of the true state of their ocular condition or who neglected its correction through indifference or procrastination The following instances of this may be cited

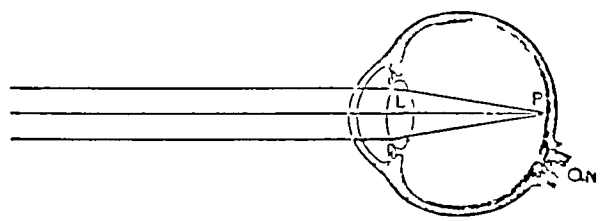

Fig 1.—Emmetropic or normal eye Parallel rays of light are brought to a focus on the retina (L)

CASE 1.—J E A a freshman in architecture replied when questioned, that his vision was good so far as he knew though his eyes ached at times after prolonged study When subjected to the tests, it was found that the visual acuity was reduced to ½ in each eye and that the eye muscles were weak, while the ophthalmoscope revealed progressive myopia The student was told of his ocular condition and was advised to consult an oculist for its correction at once

CASE 2.—Another type is illustrated by M W, a member of the second year medical class who had never worn glasses and was unaware that he had anything wrong with his eyes his vision being perfect for both near and far Toward the end of each week however, he had suffered daily from constant pain in the head As his digestion also became impaired, he attributed the headache to a torpid liver and judged it to result from lack of exercise After Saturday and Sunday s rest his head symptoms were always relieved but he became rapidly drowsy after studying but a short time in the evening and had difficulty in concentrating his attention on his books Examination revealed normal vision in both eyes but hypermetropia of high degree conjoined with marked weakness in the extraocular muscles Glasses were advised and were prescribed under atropin The head symptoms immediately disappeared the digestion improved and the power of application in studying was greatly increased

CASE 3.—Still another type was that of a law student a Hebrew aged 20 who had worn glasses since early childhood to correct myopia The glasses ever [illegible] been obtained from an optician a [illegible] before been subjected to a careful [illegible] W

tested with the letters it was ascertained that without glasses he could not discern the largest letters in the test type until they were brought to within 2 meters of his eyes and that even with the glasses he was wearing vision equalled but ¼ of normal. The ophthalmoscope showed the eyes to be in a state of rapidly progressing malignant myopia, with structural changes, which would eventually cause serious impairment of vision unless measures were instituted to correct them. It was learned that the patient's family was myopic, and that he had been nearsighted since childhood. He was of small stature, of delicate physique, and used his eyes almost constantly. The serious nature of his ocular defect was at once pointed out to him, the proper glasses were prescribed under atropin, out door exercise and less prolonged use of the eyes were enjoined, and special gymnastic exercises assigned, with a view to improving the carriage and increasing the resisting power.

The insistence in such cases as the foregoing of the proper ocular treatment has not only saved many students from much future suffering, but has enabled them while in the university to profit far more by their course of study than would have been the case had they been restricted in the use of their eyes. By revealing the origin of their headaches and other obscure symptoms, and by indicating what should be done for their relief, it has been found that these examinations have lessened the number of absences of students under the excuse of "illness" and, in several cases, by calling the attention of the student's family physician to the existence of general disorders which had not been recognized, serious illness has been averted.

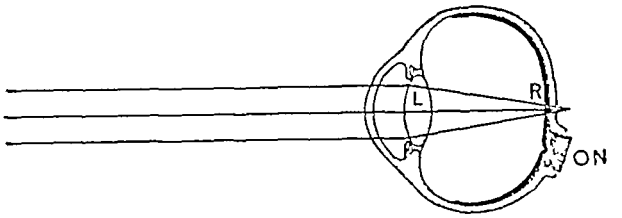

Fig. 2.—Hypermetropic or far sighted eye. The eye is too short and parallel rays of light are brought to a focus back of the retina (R).

While, therefore, these tests have been found to be of great practical value in enabling the student to continue the university curriculum without interruption, and to profit in the highest degree from its advantages, the results have also been far-reaching, for, by detecting defective vision or disease in all eyes and insisting on proper correction, further deterioration of the eyes in many instances has been prevented and the development of myopia and other degenerative processes checked. In order that what is about to follow may be the more readily understood it may not be amiss to state, very briefly, of what the refraction of the human eye really consists, and to define the difference between a far-sighted and a near-sighted eye.

The accompanying diagrams are reproductions of a cross-section through the long axis of three different types of eye: normal or emmetropic, far-sighted or hypermetropic and near-sighted or myopic human eye. The blue line marking the outline of the ellipse indicates the firm external tunic of the eye, which gives it form and consistency. The parallel lines represent rays of light falling on the eyes and being focused by the crystalline lens (L) on the retina (R), from whence the impression of the image received by this membrane is conveyed along the optic nerve (ON) to the centers of sight in the brain.

It will be seen that in the normal eye (I) the rays, by the action of the crystalline lens, are brought to an exact focus on the retina, while in the far-sighted eye (II) the rays by reason of the short antero-posterior axis of the eye are brought to a focus back of the retina. In Figure III, on the other hand, it may be remarked that the rays fail to reach the retina, by reason of the greater length of the eye.

This, briefly stated, is the optics of far-sightedness and near-sightedness. But a few additional words of explanation are still necessary. As will be presently found, the statistics compiled in our examinations, and which verify observations repeatedly made by others, show that there are but few normal eyes, most eyes being hypermetropic. It will be at once asked: Why is it, then, that *there are not more people with poor sight*, and why should far-sighted subjects be called such, when in reality the rays of light are focused behind the retina and form a blurred image on it? This may be answered by the explanation that far-sighted people escape the predicament just described because Nature provides them with a mechanism to overcome the deficiency in length, in the form of a muscle which acts on the lens to increase its thickness, whereby the rays are brought to a focus on the retina. The neutralization of its defect by muscular activity, however, is not without strain on the far-sighted eye, and if the strain be long maintained, the eye undergoes change, its tissues become congested and

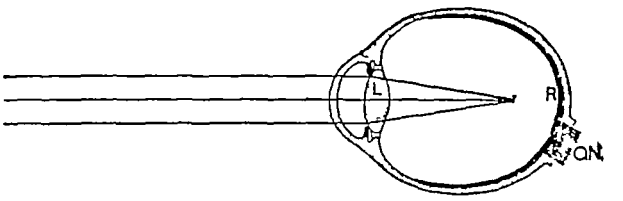

Fig. 3.—Myopic or near sighted eye. The eye is too long and parallel rays of light are brought to a focus in front of the retina (R).

softened, and, after a time, in some instances such eyes stretch and become elongated, and the hypermetropia is converted into myopia.

It might appear from this that a certain amount of stretching in hypermetropic eyes would be of advantage provided the degenerative process could be arrested when the precise point is attained where the rays are brought exactly to a focus on the retina. Did the elongation of the eyeball proceed equally in all parts, and could the process be in any way regulated, such would be the case but unfortunately, the stretching does not occur equally in all meridians, one axis becomes of greater refractive power than the other, and astigmatism results. While the hypermetropic eye can therefore neutralize its refractive deficiency up to a certain degree, this mechanical adaptation reacts on the health of the eye, and degenerative processes set in.

Nor is the near-sighted eye less prone to undergo change than the far sighted one, for although it can not by any mechanism be made less near-sighted, and the rays of light rendered more divergent and brought thus to a focus on the retina, this type exhibits an even greater tendency to degeneration than the far-sighted eye, and as a consequence of disease, either of the general system or of the eye itself, undergoes still greater elongation.

While there are a few cases of myopia which are congenital this error in refraction is almost always the result of the prolonged use of the eyes in near vision, and is increased in direct proportion to the amount of strain

placed on the eyes Ophthalmologists have come to comprehend, too, that near-sightedness, or myopia, is not only a retrograde step in refraction, and an annoyance to those who are near-sighted, from the necessity of wearing glasses to obtain sharp vision, but that it is actually a disease of the eye which frequently induces changes in the tissues of the eyeballs which after a time may render all near use of the eyes impossible and in graver cases lead to partial or even to total blindness

Numerous statistics have been recorded which show conclusively that if scholars are permitted to continue their near work without regard to some compulsory correction of their ocular defects, or attempts to improve the conditions under which they study, myopia will increase rapidly from the lower to the higher schools While in the lower classes of primary schools myopia has been recorded as occurring in about 10 per cent of the pupils, and hypermetropia in 80 per cent.—the remaining 10 per cent. possessing normal eyes—in the advanced classes in high schools and in colleges, it has been found that the myopia has increased to 20 per cent., while the hypermetropia has decreased to 75 per cent.

Statistics also show that if children with defective eyes are weeded out of schools and their eyes carefully corrected by glasses, that the increase of myopia is checked and the retrogression of the eyes is greatly diminished In view of these facts, a determined effort has been made by ophthalmologists within the past twenty years to make an examination of the eyes of all students obligatory, and in a number of cities in this country all the pupils in the public schools are subjected to some kind of an examination to determine at least the degree of visual acuity of each scholar A much more careful test is made of the ocular condition of scholars in private schools, especially in this city, but so far as we are aware, the University of Pennsylvania is the only institution conferring a degree in which such examinations are made systematically

Of the value of such tests there can be no doubt, as statistics will testify, for even though the examinations had demonstrated to but a dozen students that their eyes were defective, the importance of such tests could not be questioned, but when it is appreciated that 30 34 per cent. of the students who were examined had defective vision in one or both eyes, all doubts as to their propriety must be dispelled Eight hundred and eighty-three students were examined in all Of these, 640 were students in the college department, 108 in the medical, 81 in the dental, 51 in the law and 3 in the veterinary department. Of this total, 14 70 per cent. were noted as being myopic, while the remaining 85 30 per cent were either hypermetropic or emmetropic

In the comparison which was made to ascertain the influence of age and study on the refraction, it was found that among 633 students in the two lower classes 87 2 per cent were hypermetropic and 12 75 per cent were myopic while of 261 students in the upper classes 80 25 per cent. were hypermetropic and 19 75 were myopic

Five per cent more of myopia was found in the professional department in scholars of a similar age than in the college department, this being doubtless accounted for by the fact that most of the scholars in the college come from private or city schools, where the eyes are properly protected while the scholars in the professional schools come frequently from rural communities where accurate refraction is impossible and the condition of the eyes neglected The average age of all the scholars examined was 21 4 years and the statistics showed an increase of about 2 5 per cent. of myopia for each year during the four years of college life

Of the students examined, 609 had full visual acuity in each eye, 94 had full visual acuity in but one eye, while 180 had subnormal vision in both In this latter class, 180 students, possessing subnormal vision in both eyes, were thus under a decided disadvantage in the performance of certain forms of class-room work, irrespective of any possible ill effects to the eyes from uncorrected strain, while in the 94 students who possessed normal vision in but one eye, the student was perceptibly handicapped in the proper use of all scientific instruments Three hundred and three students wore glasses, of these, 217 were hypermetropic and 86 myopic Eighty-seven complained of headache. Of this number, 47 wore glasses and 40 did not. Of those complaining of headache, 7 59 per cent had subnormal vision, while the remaining 92 41 per cent had full visual acuity, and on this account did not suspect their eyes of being at fault

Of the 883 students examined, 35, or 3 96 per cent., had spinal curvature of scoliosis, and these were found 48 times among myopes and 10 t[illegible] among myopes Of the total number of [illegible] spinal curvature, the vision of one eye [illegible] lower than its fellow [illegible] inference of many [illegible] may be responsible [illegible]

The figures which [illegible] which have been [illegible] from the examination [illegible] to indicate the [illegible] tests as a part of [illegible] dent, and to show [illegible] regarding the [illegible] are often [illegible] below par, [illegible] insisted on for [illegible] termined effort [illegible] students to [illegible] careers. [illegible] endeavor [illegible] develop [illegible] posture of the [illegible]

THE D[illegible]

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take place in one or more of these several ways The seriousness of the situation is increased by the fact ascertained by competent observers that the vitality of the infecting germ retained within doors may endure unimpaired for several months

This particular form of infection, then, being capable of, and adapted to, dissemination by air currents, is liable to be found within the average domestic domicile everywhere that the air-borne sputum can reach, and the methods in vogue for the care and treatment of interiors thus invaded, or those infected from within, instantly assume an aspect of importance for weal or woe that can not be gainsaid or idly set at naught

The acceptance by the medical world of the truth of the discovery of the bacillus tuberculosis was spontaneous and significant, and on this foundation our practical work and professional faith have been securely builded for more than a decade But, notwithstanding such acceptance, and the wide teachings that have followed by means of the public press, there still exists among people presumably intelligent an amount of ignorance on this subject an indifference or inertia as to the observance of precaution and prevention that go to show that household customs have changed but little In larger fields, as hotels, clubs, office buildings and the like the methods pursued are often as unenlightened and dangerous as they were twenty or more years ago

For a number of years it has been the lot of the writer to be in a position to observe at close range the practices pursued in the domestic administration of certain large clubs, hotels, etc , as a result of such observation the conviction has grown that such places constitute a real seeding ground for tuberculosis among their members guests and employés, chiefly through the inattention or incompetency of those charged with their physical care and business management

Whether the conduct of household service generally has changed for the better in this respect to any perceptible extent I am unable to say, but the common broom and feather duster seem to be still wielded in residences and to hold sway there as the chosen emblems of that which is, at best, but a farcical performance in the domestic *menage*

The word farcical is used deliberately, for not only is the pretense of cleaning by broom and duster of dust nature even to ordinary observation, but viewed in the light afforded by special knowledge of the nature of dust the situation changes and becomes most serious, for the tragedies of consumption follow fast on the heels of blind inefficiency or cheerful ignorance in the everyday dealing with what may be termed the "prince of the powers of the air" in its broad relation to human health and life

In view of what is known of the bacillus tuberculosis, it is no more necessary to prove the reality of danger from flying infected dust than it is to demonstrate the multiplication table—sanitary observation, microscopical findings laboratory tests and clinical experience are all in agreement here—hence the question of the hour is, How shall the perilous nuisance of dust-making and dust-raising within doors be abated?

One of the vices of American house-furnishing is the lavish spread of carpetings These being fastened to the floors afford secure lodgment to all kinds of dirt conveyed by human or other agency and in such position can not be cleaned in any proper sense, by the ordinary domestic operations Further harborage for dangerous mobile matters is found in hangings, curtains, upholstered furniture, etc

It is through the crude, old-time attempts at so-called cleaning in such places that the chief sanitary offense is given, and direct danger to health and life arises, and in illustration a glance at some experiences, personal to the writer, may perhaps be permitted here

INSANITARY METHODS IN PUBLIC PLACES

Some years ago in St Louis an athletic club for men was formed, a special appeal being made to the younger men to join for the sake of their health, the widely announced aim of the organization being the upbuilding, development and strengthening of the body by all manly games, athletic sports and exercises The response was encouraging and a membership mounting into the thousands was secured

A large building was hired for a club house and elaborately furnished in the conventional way, even the dining room floor being heavily carpeted, as were also a large number of sleeping rooms intended for members and guests The institution was well patronized and carpets, etc , soon began to show evidence of use and wear

As a member I occasionally found it convenient to take breakfast there, and on such occasions was too often confronted by the unpleasant fact that the domestic ordering of the club had not been completed before it was opened for business In short, the sweeping of carpets and dusting of furniture went on alongside of tables where meals were being served

Respectful representation to the management against this practice availed nothing, and this was followed by emphatic protest and vigorous remonstrance, which was received with equal unconcern This disparity between the loudly trumpeted purposes of the club and this confirmed dangerous feature of its housekeeping, being too glaring for reconcilement, resignation of membership was the only recourse remaining, and this was quickly put into effect.

The paradox was thus presented of an institution catering especially to a younger generation, conducted by average business men, and ostensibly established for the promotion of physical health, employing through dull ignorance or perverse inattention methods of internal management which in disease-producing influence must largely defeat its avowed objects and subject its heedless or unsuspecting patrons to most serious peril —one hand practically undoing the work of the other

That such a situation is not exceptional, personal experience and observation has confirmed in another club of one thousand members, made up of business and professional men, the women and children of their families being also admitted to its social privileges

Here the same antiquated and pernicious methods are adhered to, the establishment scarcely ever being opened clean and in order, but confusion, dirt and danger prevailing on the principal floors, sometimes until an advanced hour in the morning Successful business men compose its board of directors, but the reign of ignorance respecting such a simple health proposition is as absolute as it was in the same institution a quarter of a century ago

Without specifying particulars, the same conclusion has been reached with respect to hotels, office buildings and business concerns where extensive carpeting is in evidence The twin scepters of the domicile broom and duster, seem to be undisputed and securely holding their place

INSANITARY METHODS IN THE HOME

The limitations of time and circumstance do not permit any extended notice of the morbid developments observed among employés in atmospheres of daily domestic dust In those places, however, in which medical scrutiny has been exercised longest and most closely the confident statement can be made that, while many contributory influences are involved, yet the pleurisies, pneumonias, bronchial catarrhs and cases of tonsillitis and influenza occurring among patrons and help find there a sufficient explanation in the local conditions, and undoubtedly these ailments prepare the way for the tuberculous infection that easily and commonly follows

This infection is spoken of by some as a disease prone to originate in the poorer quarters of a city, but its presence there, I am persuaded, is due to the fact that many wage-earners in clubs, hotels and like places are drawn from homes in such localities Medical observation shows that after a time physical deterioration takes place among those employés most exposed to dust, and this is usually evidenced by coughs and other evidence of respiratory ailment

That insidious peril from such cause can lurk in the often luxurious furnishings of places of the kind mentioned is hardly thought of by those most liable to be affected but the contention that they are real and formidable seeding places for tuberculosis can, I believe, be established as truth on sufficient examination by any one so disposed

MODERN METHODS OF CLEANING

If so much be conceded, the question then recurs as to the necessary measures of prevention, and it will readily be seen that these require the total banishment of broom and duster or any other implement or device by which dust is set afloat If carpetings are to be retained, the adoption of mechanical appliances must follow, by the use of which no flying matter will be allowed to escape, this, if necessary, to be supplemented by the wiping of exposed surfaces and furniture with soft cloths

The use of the vacuum or pneumatic method of cleaning in every hotel, club, office building, theater, church, school and business establishment should be made compulsory by law This provision as a sanitary adjunct has become just as necessary a part of the house equipment as are those similarly supplied for heating, for ventilation, for fire protection or fire escape

As to changes needed in ordinary methods in private houses to meet the demands of wholesome living as framed in the light of to-day, that is a domain concerning which others must speak but it would appear that amendment in this direction is a very necessary part of the movement toward better health This however, is a phase of the problem that first and last, lodges itself with the housekeepers of all civilized lands, and on them must rest the responsibility for its final and rightful determination

The city mentioned in which are situated the clubs, etc, whose delinquencies in a certain respect have been pointed out, is said to be the most representative of all American municipalities, in the sense that the different races and nationalities composing its population are more evenly blended than in any other place of nearly the same size, hence sanitary faults existing there would probably be found present in other cities also The indoor dust problem therefore becomes one of more than local importance and must concern peoples and populations everywhere who may be liable to fall under the influence of similar unwholesome conditions becoming in fact national, if not international, in scope

It has been written of ancient peoples that in times of great public stress or sore calamity, they would seek the altars of their respective religions and anxiously demand of the priests, wherein they had offended the gods, in order that, by suitable sacrifice or offerings atonement might be made for transgressions and the offended deity be thus placated and no longer visit on them his wrath And the people of to-day here and elsewhere, may well ask wherein they have offended when it is remembered that one-tenth of all deaths occurring in civilized lands are due to tuberculosis, and bestir themselves to the work of expiation for manifold transgressions of the plain laws of health which entail such a heavy punishment.

SUMMARY

1 Efforts toward the eradication of human tuberculosis will fail which do not take full account of household dust as a factor in the dissemination of that disease

2 Scientific tests have shown that the seeds of pulmonary tuberculosis, harbored within doors in the dried state are capable of retaining their effective vitality for prolonged periods of time

3 Any method or procedure employed in inhabited buildings which causes dust to be disseminated must be considered as tending to spread the seeds of consumption

4 Hotels, clubs, theaters office buildings schools churches and business establishments generally should be required by law to introduce and operate dustless methods of cleaning this part of their mechanical equipment being as necessary as provision similarly made for warming, ventilation and for fire protection and fire escape The employment of dustless methods in private residences is urged as being equally imperative for the control and suppression of all forms of tuberculous disease

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THE VALUE OF SULPHATES IN CARBOLIC-ACID POISONING *

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HISTORICAL DATA

The treatment of phenol poisoning by sulphates dates from the observation of Baumann,[1] in 1876, that a considerable proportion of the phenol is excreted in the urine as the practically harmless phenol-sulphonic (sulphocarbolic) acid, $C_6H_4(OH)SO_3H$, or, rather, as the salts of this acid with the urine bases Baumann suggested that this constitutes a natural mechanism for the disintoxication of phenol Since only a part of the phenol is excreted in this form, it seems reasonable to suppose that the quantity of sulphate at the disposal of the body was not sufficient to combine with all the phenol and that the efficiency of the mechanism could therefore be increased by the administration of sulphate Baumann tested this suggestion on two dogs, painting the phenol on the skin The result was in agreement with the theory although it was not sufficiently rigorous to be conclusive Sonnenburg[2] in 1878 reported favorably

* This is the second phenol poisoning The Clarke and E. D Bl
* From the Lab University
1 Arch f d ge
2 Deutsche Ztsch

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on the clinical use of sulphates in the subacute poisoning resulting from the external application of the phenol

The next work was done by Cerna[3] in 1879 and by Cafrawy[4] in 1881 Both experimenters worked on animals and formed a favorable judgment, but Tauber[5] rejects their results as absolutely valueless because of errors of technic and interpretation Tauber, in 1895, published the first reliable experimental data on the reputed antagonism He injected a just fatal dose of phenol subcutaneously into rabbits, following this by oral, subcutaneous or intravenous injection of sodium sulphate His three experiments were purely negative the animals died in from fifteen minutes to one hour, just as they would have done without treatment. He suggests in explanation that the phenol does not combine in the body with sulphates, but only with sulphur in lower stages of oxidation, and in support quotes a somewhat more favorable effect from the administration of sulphites—too small, however, to be of any therapeutic significance

The subject was taken up independently, at about the same time (1894), by Marfori,[6] who worked with different methods and arrived at different conclusions Marfori used dogs and injected the solutions intravenously, but so slowly that no acute effects were produced until death resulted, the injections lasting from four and one-half to nine hours He determined in this way the total lethal dose and the amount of combined sulphate excreted in the urine, the latter as a measure of the amount of phenol which had entered into the harmless combination Into ten of his animals he injected phenol alone, into seven a mixture of phenol and ammonium sulphate His results showed that when phenol alone is injected under these conditions from one-fourth to one-half is excreted as the sulphate When ammonium sulphate is injected at the same time, more phenol can generally be injected and a greater amount (up to three times as much) is excreted as the sulphonate The tolerance however, is limited, indeed, two of his animals died with practically the normal fatal dose, in no case was anything like the total injected quantity of phenol excreted as the sulphonate

The conclusions of Tauber and Marfori, however they differ in other respects, agree in assigning a very small value, if any, to the sulphate treatment This agreement, however, seems to have been less impressive than the differences for we find that many of the recent textbooks give prominent favorable mention to the sulphate treatment We also started our experiments with a favorable bias, based on the superficial impressions of some class experiments and on some reported clinical results

SUMMARY OF THE AUTHORS' RESULTS

In view of the prevailing contradictory opinions we shall detail our experiments rather fully, but for those who are not interested in these details we may premise the conclusion that sodium sulphate however administered, is not a chemical antidote in acute phenol poisoning This conclusion follows very clearly from our results, namely

1 Chemical combination between phenol and sulphate does not occur outside of the body neither in neutral nor in weakly acid nor in weakly alkaline solution This excludes at once all possibility of chemical combination in the alimentary canal or in the blood

2 The blood pressure and convulsive effects of phenol are not modified in the slightest degree by intravenous injection of liberal quantities of sodium sulphate under any of the following conditions

(a) When phenol, even in sublethal doses, is introduced into the stomach, and is followed within fifteen minutes by intravenous sulphate injection

(b) When sublethal doses of phenol are injected intravenously, and followed promptly by the sulphate

(c) When sublethal doses of phenol are injected intravenously after the sulphate injection

(d) When an incubated mixture of phenol sodium sulphate and sodium bicarbonate is compared with a solution of phenol in sodium chlorid solution

(e) When the sulphate is injected immediately after cardiac stoppage from lethal doses of phenol

DETAILS OF THE RESULTS

To answer the question whether or not phenol sulphonate is formed outside of the body under the conditions which obtain in poisoning, the mixtures were allowed to stand for the specified time, the free sulphate was precipitated with barium chlorid, the mixture filtered, and any combined sulphate sought for by boiling with hydrochloric acid and adding barium chlorid The result was uniformly negative The following mixtures were tried

Five c.c. of 95 per cent phenol plus 95 c.c of 1.9 per cent Na_2SO_4, standing 5 minutes The same mixture, standing 24 hours

Five c.c of 95 per cent phenol plus 95 c.c of 2 per cent Na_2SO_4 plus 0.4 per cent HCl, standing 24 hours

One gm phenol, 4 gm Na_2SO_4 + 10 H_2O, 0.03 gm $NaHCO_3$, 100 c.c. water, incubated for 24 hours at 38° C, then 6 days at room temperature

Animal Experiments.—The results of the chemical experiments left open the possibility that the phenol and sulphate might combine in the body as a result of ferment activity, or within the cells Animal experiments were necessary to decide this question These we attempted to shape so as to imitate as closely as possible the most favorable conditions for treatment in acute poisoning In view of the rapid absorption of phenol, the method of Marfori, extending the injection over many hours, appeared to us ill adapted to answer the question We, therefore, introduced the poison and antidote rapidly In investigating antagonism, one may either concentrate the attention of the sum total of the deleterious effects culminating in death, i. e., one may determine the minimum lethal dose, or, secondly, one may select one or several easily observable phenomena produced by sublethal doses The former method is generally the more satisfactory and has been adopted by our predecessors It is unsatisfactory, however, in the case of phenol since the fatal dose per kilo of body weight varies, according to Marfori, with the size of the animal, and, according to our observations, acute death with intravenous injection depends altogether on the rapidity with which the drug is introduced The blood pressure phenomena and the convulsive twitchings particularly the former, are, on the other hand, perfectly satisfactory

The experiments were made on anesthetized dogs by the usual technic The blood pressure tracings were taken from the carotid artery by a mercurial manometer The intravenous injections were made into the cardiac end of the femoral vein The phenol when

3. Medical Times, Philadelphia, 1879, ix, 592.
4. These de Paris, 1881.
5. Arch. f. exper. Path. u. Pharm., 1895, xxxvi, 197.
6. Arch. Ital. de Biol., 1894, xxii, 204.

administered by stomach tube was undiluted, but was washed down with a small quantity of water, when injected intravenously it was reduced to a 1 per cent or 0 5 per cent solution with 0 9 per cent sodium chlorid The latter was also used for control injection The sodium sulphate solution contained 1 9 per cent. of the anhydrous salt

PHENOL BY STOMACH TUBE, SULPHATE INTRAVENOUSLY

Dog 11, tracings 30 and 31 Vagi cut, 1 c c of 95 per cent phenol per kg of body weight into stomach Blood pressure fell immediately, descending 78 mm of Hg (from 138 to 60) in 4 minutes Remained at this level. Fourteen minutes after phenol, injected 15 c.c of sodium chlorid solution per kg into femoral vein Excursions slightly increased, mean pressure unaltered. Between 15 and 25 minutes after the phenol, injected 25 c c of sulphate solution per kg Slight temporary increase of excursions, mean pressure not affected up to 75 minutes, when the experiment was stopped.

Dog 13, tracings 34 and 35 One c.c of 95 per cent phenol and 1 c.c of alcohol per kg by stomach tube Blood pressure fell 61 mm in 6 minutes (from 126 to 65) Three intravenous injections of NaCl, each of 12 c.c per kg, at one minute intervals, the first 6 minutes after the phenol The blood pressure showed a very slight rise (14 mm), each injection caused some increase of the excursions Four intravenous injections of Na_2SO_4, each of 12 c.c per kg., the first 13 minutes after the phenol, the second 16 minutes, the third 20 minutes, the fourth 55 minutes Each injection caused a slight rise of pressure (6 to 10 mm) which passed off within a minute after the injection The mean pressure was 60 mm at the end of the experiment, 58 minutes after the injections of the phenol.

Dog 14, tracing 36 Phenol and alcohol, each 0 5 c c per kg by stomach In 7 minutes the pressure had fallen 34 mm (from 108 to 74) Intravenous NaCl, 11 c c per kg, 11 minutes after the phenol No effect Two injections of Na_2SO_4, each 11 c c. per kg, the first 14, the second 15 minutes after the phenol, no effect. The pressure continued to decrease gradually, being 60 mm at the end of 30 minutes

These experiments presented the most ideal conditions for the sulphate treatment Intravenous administration of the sulphate in liberal quantity (from 22 to 48 c.c of 1 9 per cent per kg) within a short time (13 to 15 minutes) after the phenol, the quantity of the latter but slightly exceeding the fatal dose in two of the dogs, and being distinctly less in the third Notwithstanding these favorable conditions, the immediate effect of the sulphate is practically negative and does not differ in any respect from that of the sodium chlorid by which it was preceded Nor was there any evidence of any later benefit, for the blood pressure showed no tendency to recover in from 30 to 75 minutes, whereas, after gastric lavage, Clarke and Brown noticed improvement, generally in from 15 to 34 minutes

INTRAVENOUS INJECTION OF SUBLETHAL DOSES OF PHENOL FOLLOWED BY SULPHATE

Dog 1, tracing 2 Five injections of phenol, each 0 01 gm per kg, as 1 per cent. solution in 10 per cent alcohol at one minute intervals (total, 0 05 gm per kg) Each injection caused a slight fall (about 15 mm) There was complete recovery after the first 2 injections, then this was incomplete so that the average pressure had fallen 11 mm (from 83 to 72) after the last injection Four intravenous injections of 1 25 c.c per kg of the sulphate solution, given at short intervals, had no effect to the end of the experiment

Dog 4, tracings 16 and 17 0 09 gm per kg of phenol as 1 per cent. solution, distributed over 4 injections Both vagi were divided The pressure recovered to 90 mm (original pressure 98 mm) Twitchings were present after the first injection (0 05 gm per kg) Five injections of sulphate, each 5 c.c. per kg (total, 25 c.c. per kg) were given within 10 minutes The pressure rose during the injection but at the end returned to the previous level Marked convulsive movements were noted.

Tracing 18 0 05 gm per kg of phenol as 1 per cent solution. The pressure fell at once 25 mm Within one minute 10 c.c. per kg of the sulphate was injected, followed by 5 c.c. per kg in one minute and again in 6 minutes The blood pressure recovered steadily, just as it would do without the sulphate, the injections making no impression on the curve

Dog 15, tracing 38 0 025 gm of phenol per kg as ½ per cent solution The pressure fell at once 50 mm (from 140 to 90), then started to recover The injection of 15 6 of sulphate solution per kg produced no impression on the curve Twitching was observed after the first injection. The pressure returned to the original in 7 minutes

Dog 17, tracing 44 0 01 gm of phenol as 1 per cent solution Pressure fell 25 mm and recovered. Eleven minutes later, second injection of phenol, 0 05 gm per kg, fell 30 mm and recovered Twenty c.c. of NaCl solution per kg caused no change in the curve Within 30 seconds after the second phenol injection, marked muscular twitching appeared, ceasing again in less than 5 minutes A third phenol injection, 0 05 gm per kg, caused marked twitchings in 30 seconds and 40 mm fall of pressure (from 120 to 80) One and one half minutes after the phenol, when the pressure had already begun to recover, injected 20 c.c. per kg of sulphate solution This did not affect the curve of mean pressure, although the excursions were considerably strengthened and slowed The twitchings practically ceased within 5 minutes, i e, about the same time as without sulphate

These experiments bear out the conclusions derived from the gastric administration The sulphate has not the slightest influence on the recovery of the blood pressure after sublethal doses of phenol

INTRAVENOUS INJECTION OF PHENOL AFTER SODIUM SULPHATE.

Dog 4, tracing 18 The animal received 0 09 gm per kg of phenol in divided doses, then 25 c.c per kg of sulphate as described above The blood pressure returned to the original level. About 45 minutes after the sulphate, injected 0 05 gm per kg of phenol as 1 per cent solution, the pressure fell 25 mm Sulphate was again injected, 20 c c per kg When the pressure had recovered, 5 minutes after the sulphate, injected 0 05 gm per kg of phenol, usual fall of pressure

Dog 15, tracing 39 The animal received 0 025 gm per kg of phenol, followed by 15 6 c.c per kg of sulphate solution The pressure fell 50 mm and returned to the original level Eleven minutes after the sulphate, injected phenol 0 025 gm per kg The fall of pressure was 60 mm, i e, somewhat greater than the fall produced by the same dose of phenol before the sulphate injection

Dog 17, tracing 45 The animal received 0 01 and 11 minutes later, 0 05 gm per kg of phenol and then a third injection of 0 05 gm per kg, followed by 20 c.c per kg of sulphate solution The first injection caused a fall of 25 mm, the second of 30 mm, the third of 40 mm with complete recovery of pressure in each instance Twenty six minutes after the sulphate, injected phenol, 0 05 gm per kg, the pressure fell 45 mm The convulsions occur as before the sulphate injection

These experiments show that the presence of sulphate in the blood before the phenol is injected, do not mitigate in the slightest degree the effects of phenol on the circulation, nor its convulsant action

COMPARISON OF THE PHENOL EFFECTS IN A MEDIUM OF SODIUM CHLORID AND ALKALINIZED SODIUM SULPHATE.

To secure the closest possible approximation of physiologic conditions to the requirements for combination of phenol and sulphate, a mixture of 10 gm of phenol 40 gm of crystallized Na_2SO_4, 0 3 gm of $NaHCO_3$ and 1 000 c.c of water was incubated at 38° C for [illegible] hours then set aside at room temperature f[illegible] In the first experiment this solution [illegible]

in the second alternately with a solution of phenol in 0 9 per cent NaCl, containing the same quantity of phenol (1 per cent)

Dog 28, tracing 67 Vagi divided Blood pressure 90 mm Injected 0 03 gm of phenol per kg in alkaline sulphate medium Pressure fell 30 mm , recovered promptly and rose to 95 mm Six minutes after the first dose, injected 0 02 gm phenol per kg in alkaline sulphate, fell 40 mm and in 15 minutes the pres sure had returned to 90 mm Thirty minutes after the second dose, injected 0 05 gm per kg in the sulphate solution, fell 70 mm with complete recovery In 33 minutes the pressure had risen to 105 mm Thirty seven minutes after the third dose, injected 0 075 gm per kg in the sulphate solution. The pres sure fell to 20 mm , respiration and heart beat ceased

Dog 29, tracings 68 and 69 Vagi divided. Blood pressure 135 mm Injected 0 025 gm of phenol per kg in NaCl, intra venously, pressure fell 43 mm and recovered to 110 mm Fourteen minutes after the first dose, injected 0 025 gm per kg of phenol in alkaline sulphate, pressure fell 48 mm and recovered to 111 mm Seventeen minutes after the second dose, injected 0 05 gm per kg of phenol in the chlorid, pres sure fell 51 mm and recovered to 110 mm Fifty minutes after the third dose, injected 0 05 gm per kg of phenol in al kaline sulphate, pressure fell 50 mm and recovered to 110 mm

These results show that an incubated mixture of phenol with sodium sulphate and alkali produce pre-cisely the same effects as a simple solution of phenol with sodium chlorid, quantitatively as well as qualita-tively

SULPHATE INJECTION AFTER LETHAL DOSES OF PHENOL.

Dog 4, tracing 18 The animal received 0 09 gm of phenol per kg intravenously, divided into 4 doses, the pressure recov ered In an hour and a half injected 0 15 gm per kg , the pressure fell to 30 mm , the heart beats were weak and slow, marked convulsions Two minutes after the phenol injected 20 c.c. per kg of sulphate solution, no improvement

Dog 15, tracing 39 The animal received intravenously 0 025 gm of phenol per kg , the pressure recovered Thirteen min utes after this first administration again injected phenol in travenously, 0 025 gm per kg , the pressure fell 60 mm (from 127 to 65) As soon as it showed a tendency to recover, i e., within one minute, again injected phenol, 0 0125 gm. per kg Seven such doses were injected in 5 minutes, resulting in a very gradual fall of the mean pressure of 18 mm (from 65 to 47) Three injections of phenol were now made, 30 seconds apart, the first of 0 025, the second and third, each, of 0 04 gm per kg These caused a further gradual fall of 16 mm (from 47 to 31 mm) when the heart suddenly stopped Sul phate was injected at once, 15 c.c. of the solution per kg , and this was followed in one minute by artificial respiration and vigorous cardiac massage Two further injections of the sul phate solution, of the same dose, were given within 5 minutes The animal did not revive

Dog 16, tracing 42 In the course of 20 minutes this ani mal received, intravenously, 3 injections of phenol, each of 0 025 gm per kg The blood pressure returned to the original (125 mm) Half an hour after the last dose a second series of phenol injections were started, 5 doses of 0 025 gm per kg being given within 30 minutes Ten minutes after the last injection the pressure stood at 85 mm , a permanent fall of 40 mm The third series of injections was started, the injections being repeated at minute intervals, or as soon as the pressure showed a tendency to rise. The first injection 0 0275 gm per kg lowered the pressure 45 mm The second, third and fourth injections (0 0275, 0 0275, 0 015 gm per kg) caused a gradual further fall of 15 mm (to 25 mm) Within 8 minutes the pressure had returned to 40 mm An injection of 0 05 gm per kg caused it to fall again to 25 mm Another dose of the same size, injected within one minute, lowered the pressure to 18 mm , at which it remained for 5 minutes when the last injection of 0 05 gm per kg was made This caused almost immediate sudden stoppage of the heart Artificial respira tion, vigorous cardiac massage and the injection of 33 c c. per kg of sulphate solution caused resuscitation of the heart, but the respiration remained paralyzed

Dog 17, tracing 45 The animal had received intravenously 3 doses of phenol of 0 01, 0 05, 0 05 gm per kg , distributed over 30 minutes Half an hour after the last dose the pressure was rather higher than at the start (134 mm) A fourth dose of phenol, 0 05 gm per kg , produced the usual fall of pressure (45 mm) followed by recovery of the pressure During the recovery, however, there was strong vagus stimulation, and 4 minutes after the injection the heart stopped suddenly, evi dently due to excessive vagus stimulation Immediately in jected 25 c c of sulphate solution, practiced cardiac massage, no recovery

The results show that sulphate injection after stop-page of the heart is no more effective than sodium chlorid injection

DISCUSSION

Our results as sketched in the preceding summary are conclusive in showing that sulphate injections do not influence the course of acute phenol poisoning ap-preciably under the conditions of our experiments When the phenol was injected intravenously, the ani-mals promptly recovered from the severe fall of blood pressure and from the convulsive twitchings, but the recovery was equally prompt without any treatment When the clinical conditions were imitated by giving larger doses of phenol by stomach and the sulphate in-travenously, the latter caused no marked permanent im-provement, no tendency to recovery There was in some cases an increase of the cardiac excursions and some-times a slight temporary improvement of blood pres-sure, but these effects were insignificant in degree and duration and were obtained equally by corresponding injections of sodium chlorid, they were, therefore, ex-pressions of saline stimulation and not of chemical antagonism

We are forced to accept the same explanation for cer-tain clinical cases which have been communicated to us informally from various sources Of these we have no exact records, but they appear to agree in the essentials In advanced cases of phenol poisoning the intravenous or subcutaneous sulphate injections produced no effect In less severe cases, on the other hand, the improvement seemed very striking, the patient often recovering con-sciousness *while* the injection was being made The very success in these instances excludes the possibility of a chemical combination, for all investigators agree that the combination of the phenol could not be effected in so short a time The improvement must have been due to saline stimulation

Our negative results agree with those of Tauber, who also worked with acutely fatal doses, their apparent contradiction to the conclusions of Marfori is doubtless to be referred to the slower introduction of the poison adopted by this investigator He succeeded in demon-strating some increase of the combined phenol in the urine, but, as he emphasizes, this combination occurs so slowly that he was obliged to inject the phenol so gradu-ally that it produced no symptoms for from 6 to 9 hours This resembles the conditions of chronic phenol poison-ing rather than those of the acute form, in which the symptoms set in with startling rapidity, and which practically runs its course, as a rule, within two or three hours

The compilation of Clarke shows that, with gastric lavage six out of seven patients had recovered con-sciousness within this time With this in mind, it ap-pears quite useless to administer an antidote which be-

comes effective only after four hours or later In a limited number of cases, death occurs from phenol after a longer period, with intervening partial recovery, but, considering the usual rapid course of the poisoning, we are inclined to refer this to indirect effects of the acute action, such as the local effects or the profound nervous shock, rather than to a delayed action of the retained phenol Even in these cases, therefore, we would expect little benefit from the chemic antagonism Whether or not it is of any use in genuine chronic poisoning, our experiments do not answer

On the other hand, we would emphasize the fact that the saline stimulation from intravenous or subcutaneous injections appears to be of distinct value clinically, although it was not very striking in our animal experiments Since this is a harmless procedure, it deserves trial in conjunction with the lavage The sulphate has generally been used in the quantity of from 0 5 to 1 liter of a solution containing 2 3 per cent of the anhydrous or 4 6 per cent of the crystalline salt, employing the usual technic of saline injection We know of no data showing whether it possesses any advantage over ordinary saline (sodium chlorid) solution The administration of sodium or magnesium sulphate by the alimentary canal would, of course, be useless for this purpose, especially as these salts are scarcely at all absorbed

SIMPLE ULCER OF THE BLADDER

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Relatively few well-described instances of simple ulcer of the bladder have been recorded, but these are sufficient to establish the existence of such a condition

It may be defined as a single non-inflammatory ulcer located in the mucous membrane of the bladder, which occasionally penetrates the entire wall

The condition is probably caused by a local disturbance in, or complete blocking of, the terminal arteries or by an interference with the trophic nerves Infection of the bladder never produces it It resembles in appearance a gastric ulcer and probably has a somewhat similar etiology

I have observed two cases, the histories of which are as follows

CASE 1.—A man, aged 54, previous health excellent had a mild attack of gonorrhea 8 years ago, no complications

Present Illness.—For eight months he has suffered from a slightly increased frequency of micturition, attended by burning and discomfort Very frequently during the day, independently of micturition, he has felt an uneasy painful sensation deep in the perineum At the present time he urinates every two or three hours during the day and occasionally at night, the pain and burning during urination have increased and the local discomfort has become greater, occasionally being felt for days at a time He describes it now as a burning or tickling sensation which is felt mainly in the dependent urethra Other than this there is no disturbance

Examination.—Large, well built, well developed man Heart and lungs negative abdominal organs negative, external genitalia normal No material can be expressed from the meatus on pressure, the prostate gland on palpation is practically normal, the seminal vesicles are normal

Urinalysis.—Pale straw color, slightly turbid, a number of fine granular particles and small shreds, acid, specific gravity 1 020, no albumin no sugar Microscopic examination showed numerous pus cells some bladder epithelium no casts a few bacilli and cocci no tubercle bacilli

Cystoscopic Examination.—Endoscopic examination disclosed a normal urethra With the cystoscope there was found a small round ulcer on the left lateral wall of the bladder about 2 cm behind the orifice of the left ureter It was sharply punched out, the immediate edges were smooth and regular, the base was made up of a red, fairly firm looking, granulation tissue, over which was a thin coating of a fibrinous exudate. The ulcer extends to the submucous tissue, but not beyond it. The adjacent mucous membrane was slightly injected, but otherwise presented no change The remaining mucosa was entirely normal, there was not the slightest evidence of a tuberculous process The ureteral orifices looked healthy and emitted a clear urine. The capacity of the bladder was normal

Treatment.—The patient was put on nitrate of silver irrigations, 1 to 10,000, twice a week. His condition is improving

In the following case the patient was seen in consultation only once and probably presented an example of a simple ulcer which was well advanced toward healing

CASE 2.—Male, aged 27, previous history, except for a remote attack of gonorrhea, entirely negative Three years ago the patient began to notice blood in the urine occasionally, and later suffered from increased frequency in micturition and some pain At the same time he had some discomfort and a burning sensation in the perineal and suprapubic regions These symptoms gradually became worse and the bleeding more pronounced During the last six months micturition has been compulsory every two or three hours during the day and from three to four hours during the night, although in the last two or three months this symptom has begun to improve and the bleeding is less frequent The general health has not suffered.

Examination.—The patient has the appearance of being in excellent health Heart, lungs and abdominal organs negative Prostate and urethra negative

Urinalysis.—Pale lemon, slightly clouded urine, acid, specific gravity 1 018, no albumin, no sugar Microscopic examination showed leucocytes, some mucus and bladder epithelium

Cystoscopic Examination.—On the right side of the lateral surface of the bladder, slightly behind the ureteral orifice, there was an irregular, ulcerated surface about the size of a ten cent piece, the edges formed a somewhat irregular outline and extended here and there as fine projections into the ulcer The edge in the main was smooth and sloped gradually to the granulating surface, so that it might be said to be almost on a level with it. It was of a bluish color, and appeared to be covered by an overgrowing epithelium The base was smooth, in spots here and there the granulation tissue projected above the surface In other words, the ulcer presented the ordinary picture seen in a healing process The remaining mucous membrane was slightly injected but otherwise appeared to be normal

While the above case may not be an example of a simple ulcer, I found no evidence of the ordinary causes (tuberculosis, for example) to explain its presence The patient had been using and continued to use silver nitrate irrigations Some months later he wrote that he was well

Simple ulcer of the bladder has been very carefully observed and described by Fenwick, Le Fur, Castaigne and others

PATHOLOGY

Two types are described 1, The simple, chronic and solitary ulcer, 2, the acute, perforating ulcer The first type is usually found as a single ulcer, situated, as a rule, on the posterior wall of the bladder It varies in size from 2 mm to 3 cm in diameter It is usually circular with clean-cut edges The base is covered with a red, not exuberant, granulation tissue over which there are scattered small part[illegible] of fib[illegible] edges are only slightly indurate[illegible] surrou[illegible]

ing mucosa is slightly injected, otherwise the mucous membrane is entirely normal

Microscopic Examination.—According to a very careful histologic examination of such an ulcer made by Castaigne, it shows, first, a layer of complete necrosis which forms a thin coating over the surface of the ulcer. Under this there is a zone of ordinary granulation tissue made up of lymphoid cells, dilated blood vessels, leucocytes and connective tissue. Immediately outside of this zone, in the specimen examined, there was definite thrombosis in the small blood vessels. The epithelium of the mucous membrane immediately next to the ulcer showed degenerative changes. Outside of this the cells were normal, but there was some injection of the underlying blood vessels. Castaigne made very careful bacteriologic examinations, both in smears and in stained sections, but found no organisms of any kind.

In the second period the ulcer becomes larger and there is an infection with pyogenic organisms which gives rise to a more or less acute cystitis. According to Fenwick, there is a tendency toward the disposition of lime salts over the surface of the ulcer which is sometimes so extensive that it produces a secondary traumatic ulceration on the opposite bladder wall.

In the third stage there is an increase in the degree of cystitis and a deep infiltration of the inflammatory process into the musculature which produces a widespread fibrous change and a contraction of the whole organ, thus interfering with its contractile power.

Microscopically, in both the second and third stages, there is seen the ordinary inflammatory process which is brought about by pyogenic organisms.

The second type, or perforating ulcer, is relatively rare, but a number of instances have been observed and accurately described. In this form there is a marked tendency toward deep erosion, and as a consequence the whole wall and the immediately adjacent structures are perforated. This type does not go on to the production of cystitis, for the reason that the perforation usually occurs very early and produces death or calls for an operation.

In Castaigne's case the autopsy disclosed a perforation through the posterior wall of the bladder, 2 cm. in width, and through the base of the ulcer. There were three liters of blood in the peritoneum, the genitourinary tract was otherwise normal. Bartlett, in 1876, at autopsy, found a perforating bladder ulcer which was very similar in appearance to a gastric ulcer. In Johnson's patient there was a simple ulcer, three inches in diameter, from which a rupture of the bladder had occurred. Caufford (1900) reports a death from perforation of the bladder. The ulcer was situated in the upper posterior wall and was similar to a gastric ulcer.

ETIOLOGY

The etiology of simple ulcer of the bladder is obscure. The lesion is probably dependent on a local disturbance in the blood vessels or trophic nerves and bears no relationship to any form of cystitis. Le Fur, in an exhaustive research, succeeded in producing a localized ulcer of the bladder by injecting organisms into the blood of rabbits and then injuring the bladder wall, but this condition would hardly correspond to a simple ulcer. He speaks of three causes, vascular, trophic and infective. The vascular type, according to him, is produced by a local thrombosis in the vessels of the bladder, which is induced by some general systemic infection such as scarlet fever, diphtheria, typhoid fever and mercurial poisoning. The trophic ulcers are occasionally seen in some form of tabes and paralysis.

SYMPTOMATOLOGY

The three prominent symptoms, as mentioned by Fenwick, are increased frequency of micturition, pain in the penile portion of the urethra and hemorrhage. For the sake of clearness the symptoms will be discussed according to the different stages.

In the first stage there is usually some disturbance in micturition, the act is more frequent and the passage of the water is attended by a burning sensation, particularly marked toward the end. Not infrequently more or less discomfort is felt in the penis. The urine does not show any very marked change, but close examination will show some pus, necrotic débris and exfoliated epithelium.

In the second stage a cystitis begins and there is an exaggeration of all the symptoms. Micturition is more often demanded and is painful, the sensation not being relieved until several minutes after the act is finished. Local discomfort in the suprapubic and perineal regions is more or less continuous, the pain in the penile urethra becomes much greater and is sometimes extremely severe. The urine is more purulent and contains more epithelium and débris, the blood, too, is in larger amount.

The bladder in the third stage loses its expulsive power and is unable to empty itself entirely, not infrequently calculi are formed and these, together with a putrid urine, greatly aggravate all the symptoms. If the condition is not relieved, the patient is gradually worn out by exhaustion or dies from an ascending renal infection.

In the second type, the acute perforating ulcer, there are no symptoms whatever until perforation has taken place. In such instances blood usually appears in the urine in either small or large amounts and in a few hours signs of perforation are present. Chauffard reports the case of a man of 26, who suddenly complained of a severe and colicky pain in the left lumbar region. There was hematuria, which increased in spite of treatment, signs of internal hemorrhage developed and the patient died after five days. At the autopsy a large quantity of blood was found in the peritoneum, but there was no peritonitis. In the posterior wall of the bladder was an elliptical perforation through the base of an ulcer, the ulcerated surface resembled that of a gastric ulcer. Bartlett, in 1876, reported a similar instance in a man, aged 53. Reeves, in 1885, observed a fatal perforation of a simple vesical ulcer in a young woman. Pousson speaks of a previously healthy woman, aged 36, who was taken suddenly ill and died in 36 hours. The autopsy showed a perforation of an ulcer in the summit of the bladder.

Burgess cites the case of a man, aged 25, whose previous health had been excellent. Suddenly, without previous symptoms, while urinating, he experienced a violent pain in the right groin and perineum, in a short time blood appeared in the urine and the bleeding kept up until the patient became very anemic. A suprapubic opening disclosed a circular ulcer, three-fourths of an inch in diameter on the posterior wall, close to the trigone. This was curetted and touched with a 1 to 20 carbolic-acid solution. Five months later the patient was well.

Castaigne's case is the most undoubted example on record of an acute perforating ulcer of the bladder. A

man, aged 36, apparently in perfect health, was attacked one morning with a very acute pain in the right lumbar region, which extended to the glans penis, this was so intense that he could not walk. Micturition from the first was very difficult, and after 48 hours the urine became bloody The pain and the blood continued, the abdomen became very much distended and tender and death occurred after six days Autopsy showed a perforation through the posterior wall of the bladder into the peritoneum, causing hemorrhage and peritonitis

DIAGNOSIS

In the earlier stage we have no means of diagnosis other than cystoscopic examination This shows a simple ulcer which has a punched-out appearance, with clean, smoothly cut and slightly indurated edges The remaining mucosa is normal

From a tuberculous ulcer it is differentiated by the regularity of its edges, the appearance of its base, the absence of undermining of the margins, of surrounding tubercles, and of tuberculosis in other organs

From the ulceration belonging to various forms of cystitis, it can be differentiated only in the stage before the development of the inflammation In the second stage of the simple ulcer, when the cystitis has been cleared up, it is impossible to say whether the ulcer has been caused by the cystitis or the cystitis by the ulcer In the third stage, in which the bladder wall has become infiltrated and a calculus has probably formed, no diagnosis can be made as to the primary condition

In the middle and terminal stages, the local symptom-complex of simple ulcer is very similar to that of tuberculous cystitis, and I feel sure that a number of so-called healed cases of bladder tuberculosis have been instances of simple ulcer The differential diagnosis can be made by cystoscopic examination, aided by the presence or absence of tubercle bacilli in the urine

PROGNOSIS

In the early stage of simple ulcer the prognosis is good, with proper treatment, practically, it will heal In the second stage, when lime salts have been deposited, and the ulcerations are exaggerated, curetting and drainage will usually effect a cure In the third stage, in which there is a great interstitial change, the prognosis is grave, the majority of these cases are not curable, and a number of patients die from exhaustion, ascending infection or other complications The acute perforating type is usually fatal, practically always so when the peritoneum is implicated Harrison recognized a very early perforation and saved the patient by an operation I have found no other similar case reported

TREATMENT

Irrigations with silver nitrate, from 1 in 10,000 up to 1 in 5000 every second day, will usually effect a cure in the first stage Le Fur reports nine cures in ten cases brought about by the use of this remedy If, after a sufficient trial, this does not succeed, the ulcer may be cauterized with the cauterizing cystoscope or a suprapubic opening made and the ulcer curetted and cauterized with the Paquelin instrument.

In the second stage, a curetting and cauterization with a prolonged drainage through a suprapubic opening are necessary to effect a cure

In the third stage drainage, irrigation and gradual distension of the bladder are all that can be done The change that has occurred in the bladder wall renders it very unlikely that a complete healing will take place

ETIOLOGY AND PATHOLOGY OF TRAUMATIC RUPTURE OF THE ABDOMINAL VISCERA *

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The abdominal viscera, while not exposed to such infrequent injury as the extremities, are of far greater importance as regards the life of the patient. The diagnosis of such injuries is often difficult, and time is of such great importance that a quick decision, followed by aggressive surgery in the proper cases, has in recent years made the prognosis much more hopeful The etiology has an important bearing in making at least a probable diagnosis, such an important factor in meeting this grave pathologic condition Either hemorrhage, shock or peritonitis is apt to follow, as a natural course rupture of any of the abdominal organs

SPLEEN

The spleen is a ductless gland situated in the left hypochondriac region at the tail of the pancreas and behind the peritoneum It weighs five to eight ounces and is of about the same size at birth, not increasing in proportion to the body It has an intimate connection with the stomach and the left kidney The tissue of this organ is soft, brittle and highly vascular, being supplied by the splenic artery directly from the abdominal aorta. The gland is enveloped by a serosa and underneath by a fibrous capsule, sheaths of which ramify through the parenchyma This organ is in a protected position and is practically suspended by two folds of peritoneum, thus offering two means guarding against frequent subcutaneous trauma

Cases have been described by Vanselow in 1696, Scheid in 1725, Zopff in 1740, Sporing in 1775, Pyle and Wunder in 1789, and Chisholm in 1811 Andoward, in 1827, considered intermittent fever as a cause of rupture The excessive use of alcohol was ascribed by Thompson, in 1829, as the reason for rupture in a case reported by him There are numerous individual cases in the literature which I will not dwell on, but will mention collective statistics Edler reported 160 cases of injury, of which 51 8 were subcutaneous Berger collected 300 cases in the male sex and 60 in women In 1901 Fevrier presented instances of 56 ruptures Statistics show that, comparatively speaking, rupture of the spleen is not of frequent occurrence Of 131 cases collected by Lewerenz, 82 occurred in pathologic organs

A healthy spleen is seldom injured Enlarged spleen due to malaria tuberculosis, syphilis in the newborn and typhoid fever is a predisposing factor It has even been ruptured through violent muscular action during sneezing and vomiting Abdominal palpation in a cachectic patient is said to have been followed by this accident. There is record of several cases in which it ruptured during pregnancy and childbirth Lamarchia says that the hilus is especially prone to yield The capsule has an intimate relation with the parenchyma so that both are usually torn together Slight injur may cause hemorrhagic foci in the spleen substance or the parenchyma may be injured while the capsule remains intact causing an intracapsular hematoma In time this may become absorbed if infection take

* Read at a symposium [illegible]

place it may become adherent to adjacent hollow organs and discharge its contents This favorable termination, however, is exceptional The tear is usually through the envelop, rapid hemorrhage occurs, and only speedy surgical intervention will save the patient's life

PANCREAS

This organ is the best sheltered of all the abdominal viscera and the least often implicated Mikulicz reported 24 cases of this injury, the three principal causes of which were Passage of a wagon wheel over the abdomen, crushing between cars, and the kick of a horse The injury may be so great as to crush the pancreas against the vertebral column and divide it into two parts Mikulicz reports such a case

Reasoning from an anatomic standpoint, rupture of the pancreas alone without injury to adjacent organs must be one of the rarest pathologic conditions

The relation of trauma to pancreatic cysts is most probably intimate In slight injury of the organ blood collects in the tissues of the organ and beneath the peritoneum, causing cystic degeneration This process should not be mistaken for hemorrhagic pencreatitis Experimental research has shown that blood effusion in the pancreas is not readily absorbed, but will give rise to cyst formation if resorption is unfavorable, as by the application of iodin to the injured parts Hemorrhagic cysts may follow injuries of the upper portion of the abdomen with effusion into the lesser peritoneal cavity Moynihan thinks that so-called pancreatic cysts are in reality peripancreatic or pseudocystic effusions into the lesser peritoneal cavity Hagenbach distinguishes between hematoma in which bleeding occurs into preexisting cysts and apoplectic cysts resulting from hemorrhage into the softened degenerated gland substance Injury to the pancreas can cause a discharge of pancreatic secretion, giving to the contents digestive power, and may even lead to a pancreatic fistula Jordan Lloyd claims that when fluid in the lesser peritoneal cavity is found to have the property of converting starch into sugar we may assume that the pancreas has been injured Mikulicz says that the pancreatic juice mixed with blood has a very toxic effect and can result fatally without bacterial infection

LIVER.

This, the largest gland in the abdomen, is situated, comparatively speaking, superficially Its location under the right costal margin and the juxtaposition to the abdominal parietes, together with its relation to the ribs, vertebral column and diaphragm, exposes it to injury, and as a consequence it is ruptured more frequently than any other gland structure in the abdomen Moreover, it is not compressible and its supply of elastic fibers is few As probable predisposing causes we must mention tuberculosis, syphilis and amyloid degeneration. Close proximity of the lower ribs accounts for rupture six times as frequently on the right side as on the left and twice as often on the convex as on the concave surface Terrier and Auvray reported 46 cases, collected from the literature, of which 33 patients recovered and 13 died Edler, in 1887, published statistics of 543 cases the mortality being 67 per cent.

There are three forms of subcutaneous injury 1, Rupture of the hepatic tissue, as well as the capsule, 2, subcapsular hematoma underneath the capsule, 3, central hematoma which may undergo cystic or abscess formation When the parenchyma is opened there is usually severe hemorrhage, because the organ is very vascular and because the vein walls are held open by the liver tissue The patency of the veins may also facilitate the entrance of hepatic cells into the blood current and set up pulmonary embolism When there is superficial laceration, bile flows after a few days, when the layer of coagulation necrosis is cast off

The gall bladder, especially when distended, as in hydrops, is prone to rupture under a very slight force The ducts may also be implicated in certain instances Courvoisier mentions 34 cases of subcutaneous rupture of the bile tracts, with death in 22 Experiments on animals show that extravasated bile gives rise to violent symptoms, but not necessarily to a fatal peritonitis Bile from healthy ducts is sterile, but serves as a most excellent culture medium for bacteria which may pass down from the duodenum If there is a pre-existing infection of the gall bladder or ducts, an immediate septic peritonitis is inevitable Cholemic intoxication due to resorption of bile by the peritoneum is also a danger of no small moment

STOMACH AND INTESTINES

While the stomach gives rise frequently to peritonitis due to a perforating gastric ulcer or carcinoma, in comparison with the intestinal tract it is rarely damaged by blunt force Petry collected 219 cases of subcutaneous injuries of the alimentary canal, of which the stomach was involved only 21 times, while the small intestine was injured 172 times In 111 cases Coull Mackenzie found the stomach injured only once, and then there was an accompanying wound of the spleen, showing that great force had been exercised For obvious reasons the stomach is well provided for against damage by external contusion, and I will describe in detail the more frequent injuries of the intestinal tube

FREQUENCY OF SEGMENT OF INTESTINE INVOLVED

These injuries are found most often in men and young adults by reason of their greater exposure to injury In a study of the statistics of the relative frequency of rupture of the different portions of the intestinal tract, no mention is made in many instances of the exact anatomic location of the lesion Jalaguier claims that in all contusions of the abdominal wall in which the viscera are injured the digestive tract is involved in one-eleventh of the cases The statistics are based on those of Thomas Morton, 234, and those of Coull Mackenzie, 111, making a total of 345, of which 31 concerned the gastrointestinal tract Chavasse found the ileum and jejunum injured 106 times, large intestine 19, duodenum 7, small and large intestine, together, 7, and the rectum 1 Curtis, in 113 cases, found the large intestine injured only 4 times Bryant, in a series of cases, gives the duodenum 2, jejunum 7, and the ileum 10 In 10 cases collected between 1873 and 1890, Croft states there were 7 of the ileum and 3 of the jejunum Maylard recorded 10 cases, of which 6 were injuries of the ileum and 4 of the jejunum Poland discovered 5 cases of rupture of the large bowel out of 64 injuries to some portion of the intestinal tract. In 40 cases of rupture of the small intestine, only 4 occurred in the duodeum

It will be seen that while the duodenum is firmly fixed in its position, it is, comparatively speaking, rarely injured It is protected by its thick walls and also by its deep position As we proceed in a downward direction to the ileocecal valve, traumatic rupture becomes correspondingly more frequent This condition is explained by the greater exposure, especially of the ileum,

the mobility of the intestinal coils, and by the gradual attenuation of the tunics of the small intestine. The large bowel is protected in the loin and hypochondriac region. Its contents, which are usually of a semi-solid or solid consistency, militate against injury while we know that the fluid contents of the small intestine play an important rôle in rupture.

MECHANISM OF INJURY

Speaking in a general sense, blows directed above the level of the umbilicus are unlikely to cause intestinal injuries. There are certain accidents which should invite suspicion of rupture. Thomas Bryant has well said:

> When an individual has been run over, the wheel passing over the abdomen or back, or has had a kick from a horse, a fall from a height, or a crush between two obtuse bodies, there is a great probability of injury to some solid viscus or laceration of the intestine.

The usual nature of injuries which produce rupture is shown by the 149 cases of gastrointestinal involvement collected by Chavasse, 36 were due to kick of a horse, 13 were due to kick of man, blows by clubs, etc., 23 were due to crushing of wagon wheels. It is obvious that we must first consider the force applied in consideration of the mechanism of injury.

We may classify such force into, first, direct, second, indirect. By direct force I mean that the vulnerating body has been applied in the nearest line to the exposed intestines, that is, against the abdominal parietes. By indirect force I have reference to an impulse conveyed to the intestines by an impact directed on the buttock or the lumbar region. Again, we can classify such injuries in regard to the nature of the applied force into, 1, percussion, 2, compression. Strictly speaking, the great majority of cases of traumatic rupture of the intestine are due to compression, although there is only one vulnerating body. A blow is administered on the abdominal wall, but the rupture is due to the compression between two solid bodies, that is, the vulnerating force and the vertebral column behind or the bony pelvis. This is substantiated by Makin's observation that intestinal ruptures are found most often in that portion of the intestine which is low in the pelvis. There are undoubtedly ruptures produced in the true sense of percussion, that is, the impulse of the blow might cause violent momentary vibrations in a coil of intestine over-distended with fluid contents, and thus cause a rupture. This supposition is supported by the fact that in the great majority of cases the rent in the bowel is at the convex surface, diametrically opposite the mesenteric border. All cases of rupture produced by indirect force would be effected in this manner.

In a careful search of the literature several years ago I found only 2 well authenticated cases of rupture produced in this manner, both of which were published in 1902. Dr. J. F. Bottomly reports a case in which a patient was struck in the back below the left shoulder blade by an approaching wagon. Operation showed a perforation of the first portion of the jejunum. Westbrook describes a case in which a wagon-pole struck a man in the lumbar region. Autopsy revealed a rupture at the junction of the duodenum and jejunum large enough to admit two fingers. In my practice I had a case illustrative of an injury to the intestine, which was produced in a unique way and shows the possibility of a force of small degree directed on the buttocks capable of producing intra-abdominal laceration.

> The patient, a young woman, aged 26, of previous good health, while hurrying into her house to escape a thunder storm, slipped and fell, striking the ground on the right buttock. She had partaken of a hearty supper. No immediate alarming symptoms were noticed, and the patient retired as usual. Several hours later she awoke with severe abdominal pains, and the usual symptoms of a perforative peritonitis. Operation revealed a small perforation, about the size of the little fingernail, on the convex surface of what appeared to be the lower portion of the jejunum. The patient made a perfect recovery.

The state of the abdominal muscles at the time of injury plays an important rôle in intestinal injuries. A blow delivered on a rigid abdomen loses considerable of its force, while an impact directed against the same structure in a relaxed state is transmitted directly to the underlying intestinal coils, and enhances the liability of a rupture.

This assertion has been demonstrated beyond a doubt by the beautiful experiments of Eichel. He first made a series of experiments on dogs, profoundly etherized. The animals were placed on the back, the extremities being tied and extended. A forcible blow was struck on the abdomen with a heavy club. The experiments were all negative, laparotomy showing the intestines intact and only slight extravasation in the tissues of the abdominal wall. The same experiments were performed on dogs which had been over-fed for two days in advance, but the results were also negative. In another series of experiments the hind legs were loosened before the stroke. In the first experiment the blow was delivered too high, producing a rupture of the liver. The stomach wall was also the seat of suggillation. In other experiments a hammer was used instead of a stick to produce the trauma and rupture was almost invariably produced. Experiments were also made by striking the lumbar region, the intestines having previously been insufflated with air through the rectum, but no rupture of the intestines was produced. Chauveau maintains that the reverse is the rule. He claims that contraction of the abdominal muscles diminishes the abdominal cavity, and also immobilizes the intestinal coils, and thus favors rupture. This argument, however, should bear no weight, as it stands simply as a personal conviction, or, rather, an hypothesis, while Eichel's opinion rests on the firm basis of experimental research.

Other conditions may predispose to injury, such as adhesions, alteration of intestinal walls, old reducible hernia, in which the intestinal walls have been weakened by pressure. There has been much discussion as regards gaseous distension facilitating rupture. In 1875 Longuet claimed that the elasticity of the gas was unfavorable to rupture, while liquid distension favored it. This theory was accepted by Mugnier. The hydrostatic pressure of intestinal fluids is evidently the cause of rupture in cases produced by indirect force. That gaseous distension would act as an elastic cushion seems plausible.

PATHOLOGY

From a pathologic standpoint, we can divide these injuries into, 1, contusion, 2, rupture incomplete and complete. Contusions may be of all degrees, either a simple interstitial ecchymosis, or a submucous infiltration, or else there may be an infiltration through the entire thickness of the intestinal [illegible] surface is more or less roun[illegible] diameter is usually in the [illegible] color of the ecchymotic [illegible]

infiltration, and is usually white or yellow The surface is denuded and covered by an exudate Sometimes different areas of contusion are found in the same intestinal loop, or in different loops in the same region Contusion probably is often produced and causes no untoward symptoms There are, however, cases on record in which, after an injury, the patient progressed well for days or even weeks, when suddenly symptoms of a perforative peritonitis arose, and the autopsy revealed a perforation. At the time of the accident a contusion was produced, which in time became the seat of an infection, or else by reason of an interference with circulation a necrosis resulted which compromised the integrity of the intestine

Thomas Bryant reports two cases of delayed rupture One progressed favorably after the accident until the nineteenth day, when the patient died Necropsy showed perforation of the duodenum, and an ulcer on the posterior wall of the stomach In the other case there was a perforation on the fifth day Autopsy demonstrated a perforation of the ileum 4 inches above the cecum

Incomplete ruptures, when one or two of the tunics are torn, in all probability are frequent, as far as pathologic investigation can be pursued, however, they are supposed to be rare In a case observed by Jobert, in 1825, ecchymotic spots were found in the small intestine, and a rupture of the longitudinal fibers of the colon discovered Poland reports 2 cases of such ruptures in the stomach, in one the mucous membrane, and in the other the peritoneal coat. Complete ruptures, in which all the tunics are ruptured, are more often brought to view on the operating table and in the postmortem room Chavasse, in 149 cases, found this condition 14 times, duodenum 1, junction of duodenum and jejunum 3, jejunum and ileum 10

Complete ruptures are usually single but may be multiple, especially following the kick of a horse Moty claims that there are often two perforations corresponding to the two lateral extremities of the horseshoe. It is a marvelous fact that a contusion of sufficient intensity to cause a complete rupture does not often injure other viscera, for Coull Mackenzie, in 111 cases, only found 2 with accompanying injury to the spleen and liver The rent in the intestine always occupies the point diametrically opposite the point of the mesenteric insertion It is sometimes a clean-cut wound, and sometimes the border is ragged and irregular Leakage after rupture can be entirely prevented by means of two factors

We must remember there is no abdominal cavity in reality, the whole of the visceral contents being so closely and equably brought into contact by the pressure of the abdominal muscles and diaphragm that considerable force is required of the intestinal contents to overcome this The influence of the pressure of the abdominal muscles on the intestinal contents is well-known clinically, because if an injured coil of intestine protrudes from the abdomen devoid of the intra-abdominal influence, extravasation takes place much more readily The intrinsic contractility of the intestinal tunics is another inhibitory agent against extravasation Travers, long ago pointed out that in a puncture of the gut, or even an incision, two or three lines in length, an eversion or prolapsus of the mucous membrane takes place, and hermetically seals the opening If the aperture is more than four lines in extent, the protuberant mucous membrane is incapable of protecting the perforation The protrusion of mucous membrane is due to the retraction of the longitudinal fibers There is also contraction of the circular muscular fibers around the protruded mucous membrane, according to Jobert, thus, temporarily at least, preventing extravasation. Even in extensive complete rupture there is little likelihood of visible fecal extravasation, for Makins, in an exhaustive report of 20 cases, in St Thomas' Hospital, London, found no appreciable escape of fecal matter

KIDNEYS

The kidney will next be considered, although, in the true anatomic sense, it is not an abdominal viscus, as it is extraperitoneal It is a loosely suspended organ, and is fairly well protected Herzog found 16 spontaneous injuries in 7,805 autopsies Maas, in 1878, was able to collect only 71 cases In 1896 Kuster presented 306 cases, of which 241 were free from other complications Keen studied 118 cases since 1878 Güterbock, in 1895, reported 326 cases (males, 262, females, 64)

In view of the foregoing statistics, it is at once apparent that this injury is fairly frequent These injuries are of most frequent occurrence during the second and third decade of life, and 94 per cent occur in the male sex The greater exposure which men must meet in their daily vocation accounts in a great degree for this marked difference in frequency between the sexes, but Kuster, who has given this subject such great study, offers an explanation by reason of anatomic difference between the two sexes The broader iliac crests and the thick layers of panniculus adiposus, characteristic of the female, *Kuster thinks gives protection to the kidney* The female mode of dress, to my mind, is also an additional safeguard especially the corset, which must make this organ secure against trauma

The right kidney is most frequently injured Kuster, in 272 cases, found right kidney, 142, left kidney, 118, bilateral 12 The usual mode of violence is a blow from the side or behind, or a crushing injury between two resisting bodies Edler, in 90 cases, gives the following causes Crushing injury, 30, falls, 28, run over, 13, blows, 9, shell contusions, 4, unknown, 6 Rarely the kidney may be damaged by a force, administered at a distance, such as lifting heavy weights, or a fall on the buttocks These latter injuries are supposed to be due to jamming Le Dentu ascribes it to contrecoup, as in the brain

The mechanism of injury in most cases is due to bending, or fracture of the lower ribs, and the kidney is forced against the transverse processes of the vertebræ Fracture of the ribs occurs occasionally Küster found this complication 14 times Kuster speaks of the hydraulic force and he has made some experiments which make his assertions plausible Kidneys removed from animals were thrown to the floor and the injury produced was slight, but where the renal vein and artery were ligated and the pelvis of the kidney and ureter distended and tied off, and the kidney then allowed to fall to the floor there was a far greater degree of injury Hydraulic pressure causes bursting, therefore, a rent from the pelvis outwards

Güterbock believed the force applied caused pressure at the poles of the kidney and thus produced a transverse rupture The majority of rents are found in the direction of the transverse axis, and are most marked near the middle of the organ, which is the narrowest and weakest The tubules run in a lateral direction, the kidney substance would therefore give away in the line

of least resistance Francis S Watson, who analyzed 650 cases of subparietal injury of the kidney, maintained that when a single intraperitoneal organ was injured in association with laceration of the kidney it was always on the same side The pathologic condition produced is in direct ratio to the degree of the vulnerating force applied There may be a tear of the fatty capsule with an infiltrating hematoma around the gland, or, moreover, the peritoneum may be torn Kuster, in 251 cases, found the peritoneum injured 14 times This is most likely to occur in children under ten years of age, because the perinephric fat is not developed and the anterior surface of the kidney is separated from the peritoneum by only a delicate fascia Death occurred in 6 out of 7 cases in the Maas statistics

Contusion may cause effusion of blood underneath the capsule and which, of course, is very limited There may be laceration of the kidney substance without implicating the pelvis A tear into the pelvis of greater or less degree is an injury of serious aspect. There is hemorrhage into the fatty capsule, thence into the retroperitoneal space along the large intesine, mesentery, spermatic cord, to the inguinal ring, scrotum, labiæ, pelvis or abdominal wall Urine follows and leads to a gangrenous inflammation or a perinephritic abscess, especially is this the case if a blood clot occludes the ureter If the kidney is crushed into fragments, gangrene must surely follow, and if the integrity of the renal vessels is interfered with, the patient succumbs, unless immediate surgical measures are adopted

Morris asserts that there may be extensive effusion around the kidney, with little evidence of injury to the kidney itself, while, on the other hand, the kidney may be almost reduced to a pulp, with little or no extravasation into the surrounding structures The ability of the kidney to maintain functional capacity and also remarkable regenerative power has been shown experimentally and clinically A hematoma in the renal region is very prone to become infected, causing a pyonephrosis, perinephritic or paranephritic abscess Subparietal injury of the ureter is rare Le Dentu found record of only 20 cases in 10 years There are only a few authenticated injuries of the ureter Cases have been reported by Barker, Stanley and Poland The most frequent cause is the passage of a vehicle across the body The mechanism of the injury is probably produced by the forcible stretching of the ureter over the transverse process of the first lumbar vertebra as the injury is most frequently situated near the kidney There would be retroperitoneal effusion of both blood and urine and septic peritonitis if the peritoneum is injured A remote result may be hydronephrosis due to cicatricial contraction at the seat of injury

BLADDER

This subject has been treated in a masterly manner many decades ago by Dr Harrison, of Dublin, Houel of Paris and Stephen Smith, of New York and more recently in 1884 an exhaustive monograph was published by Walter Rivington In studying rupture of the bladder two conditions must be taken into account, the state of the bladder wall whether normal, or the seat of previous disease or degeneration, and also whether empty or distended

This accident is most frequent during young adult life and it is astonishing when we consider how much more frequently this accident occurs in males Stephen Smith collected 78 cases in 67 of which the patients were men This difference in ratio is not probably due to greater exposure altogether, but was anatomically explained by Dr Harrison in the following manner

1 Greater size of female pelvis 2 The bladder inclines more forward and enlarges transversely 3 The uterus and its folds break the shock of violence, and prevent direct concussion against the sacral promontory It is a popular anatomic notion that the bladder is more capacious in the female than the male, but, according to Quain, made on the authority of Henle and Luschka, the female bladder is decidedly smaller, but of different shape, being wider transversely and shorter from apex to base In Smith's 78 cases, 48 were due to direct violence, 15 concussion of body, 4 parturition, 1 retroversion of uterus, 4 stricture of urethra and cause not specified in the rest

Alcohol has a double influence in the etiology of this injury It causes an increased secretion of urine and a quick distension of the bladder It blunts the sensitiveness of the mucous membrane and the call to micturate is so feeble that it is disregarded by the individual and the distension is allowed to increase Secondly, the abdominal muscles are so relaxed that they offer no resistance to a blow Houel in 41 out of 107 cases of intraperitoneal rupture, distinctly specified or implied that the patient had been drinking alcoholic liquors freely or was actually drunk at the time of the accident Strictures and enlarged prostate extending over a long period of time have caused such a morbid condition of the bladder that rupture is greatly facilitated When laceration takes place in consequence of inordinate accumulation of urine, due to prostatic hypertrophy or obstruction of the urethra, there is degeneration of the muscular coats, and under such circumstances a trivial exertion, such as vomiting, sneezing or micturating, may cause rupture

Assmuth reports two cases in which the bladder was ruptured, owing to lifting heavy weights This may also happen during labor Sasse, Mercier, Liston Howship and Field report cases of rupture due to hypertrophied prostate The pressure of the diaphragm and abdominal muscles under such circumstances on the overdistended viscus, is equivalent to a severe blow on the hypogastric region Houel describes a condition applicable to a small group of so-called spontaneous ruptures It is the presence of pouches of mucous membrane passing out through intervals between the muscle fibers The supplementary pouches were studied by Cruveilhier, who called them tunicated or tunicary hernia When large the pouches have been taken for multiple bladders

Distension is one of the main factors It is doubtful if the empty bladder is ever injured, except in case of fractures of the pelvis Rivington in 110 intraperitoneal ruptures, had distinct evidence that the bladder was full in 55 In some of the others the patient is described as drunk, while in the rest no mention is made A slight blow on the anterior abdominal wall when the bladder is full, makes pressure on the posterior pelvic brim As regards the actual mechanical force Bartels gives three possible causes 1 blows received in the region of the bladder, 2, fall from a height, 3 pressure of some heavy body over the pelvis Antal mentions a fourth class due to artificial distension The first is the most usual, however, that is a direct blow

Guyon claims that ruptures which are caused by artificial distension take place by reason of the [illegible] muscles, contracting in conjunction with [illegible],

thus causing rupture Dittel showed that in artificial inflation with air in the cadaver rupture was almost always intraperitoneal If the bladder was distended with water, 50 per cent were intraperitoneal Of 8 cases reported in actual practice, 7 were extraperitoneal and 1 intraperitoneal Of 78 cases due to all causes, reported by Stephen Smith, 50 were intraperitoneal In 169 cases of Bartels, only 49 were extraperitoneal Because of the intimate relation of the bladder to the pelvis, naturally the former is often ruptured in fracture of that part. According to Bartels, in 179 cases of rupture, fracture of the pelvis was present 109 times, os pubis, 27, ischium, 12, ilium, 9, sacrum and pubes, 5, symphysis pubis loosened, 22, sacroiliac synchondrosis loosened, 10, fracture not determined, 11, fracture multiple, 30 King, Howship and Malgaigne each published a case occurring in a fetus

The majority of tears of the bladder are intraperitoneal and situated in the posterior wall, which is in accordance with the physical principles of the resolution of forces Morbid anatomy teaches that the rent may pursue a vertical, transverse or oblique course In the majority of instances the aperture has been found to extend from the attachment of the urachus through the posterior wall of the organ, involving not only its proper tissues, but the peritoneal covering as well The extraperitoneal ruptures are situated in the anterior wall In the so-called idiopathic cases the rent is small and often circular, coinciding with pathologic tissue, while in genuine traumatic cases it is generally an inch or more in length Hemorrhage is not as profuse in trauma of this structure, as it is not as vascular as the glandular organs, but sepsis of the most virulent type will follow extraperitoneal wounds and rapid progressive peritonitis is the termination of the intraperitoneal laceration, unless radical surgery follows immediately after the accident.

Clinical Notes

CASES PRESENTING SYMPTOMS OF BRAIN DISEASE *

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The following cases, illustrating different phases of cerebellar disease, are considered worthy of record

I A CASE OF HYSTERIA PRESENTING SYMPTOMS OF CEREBELLAR DISEASE

Patient—A tailor, aged 42, presented himself on account of difficulty in walking a few weeks after the removal of several teeth, one of which was carious, for the relief of swelling of the face. In addition he had suffered fright two weeks previously from having remained for a short time alone in a house in which a close friend had died. The man walked like a drunken person, with a tendency to fall to the right in consequence of a sense of weakness of the entire right side of the body He had a feeling as though he would fall, and he had difficulty in arising from the sitting posture The right chest felt as though it were grasped in a vice, and there was pain in the right side of the head. There was tinnitus in the right ear, with impaired hearing

Examination—The gait was found to be awkward and clumsy, though undistinctive Station was steady at first, but after a while it became uncertain and finally swaying The knee jerks were preserved Sensibility was less acute on the entire right side of the body, including the face, than on the left The dynamometric record was 75 and 77 on the right, 70 and 75 on the left The pupillary reactions were normal and there was no limitation of the fields of vision, nor any lesion of the eyegrounds The right ear drum was retracted, but freely movable The hearing distance on this side was 3/12, and air conduction was better than bone conduction The left ear drum also was freely movable Hearing distance with this ear was 4/12, and air conduction was greater than bone-conduction. The Weber test was in favor of this ear There was no sign of inflammatory trouble in connection with the auditory apparatus The action of the heart was rhythmic and its sounds were clear The radial artery was somewhat resistant

Symptoms—The appetite was variable, though mostly poor Nausea was present, but there was no vomiting The bowels were moved with difficulty twice or thrice daily, and the stools were scybalous

Diagnosis and Treatment—I concluded that the case was probably one of hysteria, and, in addition to prescribing a mixture of aloin, cascara and assafetida, I instituted a course of hypnotic suggestion Sittings were held every second day and the patient was dismissed well at the end of three weeks

In this case the disorder of gait, in conjunction with the feeling of unilateral weakness—of which, however, there was no objective evidence—suggested the existence of cerebellar disease, and the tinnitus and impaired hearing an aural origin There was, however, that about the patient which suggested hysteria, and this suspicion was strengthened by the absence of evidence of organic disease and it was established by the results of treatment

II A CASE PRESENTING SYMPTOMS OF INTRACRANIAL TUMOR, WITH RECOVERY

Patient—A huckster, aged 30, married, first seen January 15, 1906, complained of having been sick for one week, with vomiting, anorexia, bad taste, headache and vertigo The patient drank tea and coffee sparingly, while of beer he took several glasses and of whisky one drink daily He had never indulged excessively in alcohol, although he was a large eater He had never used more than small amounts of tobacco He gave no history of traumatism, and he denied venereal infection He had had scarlet fever at the age of 12 The family history presented nothing noteworthy

Examination—Gait and station were ataxic, and the man was unable to get about Knee jerks, Achilles tendon jerks, and plantar reflexes were all preserved The grasp of the hands was fairly good. The patient thought his vision impaired but no objective evidence of ocular disturbance could be obtained. The action of the sphincters was underanged, and the bowels moved regularly The tongue was heavily coated There was no cough, and heart, lungs, liver and spleen presented no abnormality There had been loss of weight to the extent of fifteen pounds The pulse was 68 and the temperature was 98° There had been bleeding from the nose two weeks previously On further inquiry the patient stated that he had vomited every morning for a year until one week before I saw him. He had, however, not suffered from headache previously, nor from vertigo The headache was diffuse in distribution, and there were no mental changes

Treatment—The existence of a tumor of the brain was suspected, and laxatives, together with sodium bromid (*gr xv every three hours*) and *potassium iodid* (*gr xv thrice daily*, gradually increased), were prescribed

Subsequent Examination—Two days later tenderness of the scalp in the right parietal region was elicited on percussion The knee jerks were preserved Station was unsteady The patient leaned toward the right, and felt a tendency to fall in this direction, although occasionally he would fall also to the left. He had great difficulty in walking although there was no steppage gait The patient now attributed to vertigo the impairment of vision previously complained of He felt better generally and he was somewhat drowsy Headache and vertigo persisted in unchanged degree but vomiting was less There had never been loss of consciousness or convulsion

* Patients demonstrated and paper read before the Philadelphia Neurological Society Dec. 21 1906

On January 19 the dynamometric record was 115 and 105 on the right and 65 and 60 on the left. It was now noted that the knee-jerk was less active on the left than on the right, and the patient stated that he had been aware for three or four days that the left side of his body was weaker than the right. Three days later he was seen with me by Dr C K. Mills and Dr W W Keen He now spoke definitely of weakness of the left upper and lower extremities On examination no paralysis of any ocular muscle or of the associated movements of the eyes or of the facial, temporal, pterygoid or masseter muscles, or of those of the tongue or the mouth could be discovered Nearly all of the movements of the left upper extremity were preserved, and they were executed almost as well as on the right, except perhaps for some weakness of movement in distal parts There was distinct ataxia in the left upper extremity, as tested by approximation of the finger to the nose and to objects of small size. In the left lower extremity also all movements were preserved, although those of the foot were a little awkward The test of bringing the heel to the knee was well executed. The knee-jerks were preserved, that on the left being the more marked Slight ankle-clonus also was present on the left, soon, however, disappearing The entire left lower extremity was ataxic. Station was good The patient was able to stand on the right foot only with great difficulty and on the left foot with even greater difficulty There was no Babinski phenomenon on either side, and plantar flexion of the toes was observed once on the right There was no metatarsophalangeal response, but marked dorsal flexion of the feet on both sides The stereognostic sense was preserved and there was no loss of sense of posture or of touch or of pain or of localization There was no hemianopsia on either side There was some mental sluggishness The patient stated that his condition was unchanged, the headache and vertigo being as bad as they had been, although there had been no vomiting for six or seven days He was constantly drowsy and he slept well In addition to the treatment already mentioned mercuric chlorid (gr 1/24 thrice daily) was now prescribed

On January 26 the patient thought his headache less, and that the left hand was not so weak as it had been, but he still walked with difficulty He was constantly sleepy The knee-jerk was distinctly more marked on the left than on the right, but there was no ankle-clonus and no Babinski reflex

On February 2 the patient reported that he was still better than he had been He walked better His head felt better, and his headache was less, the pain now being referred to the vertex and varying in situation There was less vertigo and the eyesight was thought to be improved There was, however, no improvement in the power of the left upper extremity The knee-jerk at this time was increased on the right, and even more so on the left Slight ankle clonus could be elicited on the left, but none on the right. The Achilles tendon jerk also was more pronounced on the left than on the right, but no plantar reflex could be elicited. The dynamometric record was 145 and 122 on the right, and 100 and 75 on the left. In standing the patient held his feet some distance apart, and his station was merely a little uncertain with the feet in apposition and the eyes open or closed The gait was clumsy and uncertain, the feet being held some distance apart. The patient was now able to stand fairly well on his right foot and somewhat less well on the left foot He exhibited a tendency to turn his head toward the left The pupils were full equal, regular reactive to light and in accommodation Ophthalmoscopic examination disclosed only some distension of the retinal veins

On February 9, the dynamometric record was 137 on the right and 102 on the left Station and gait were improved The pupils were normal Coördination was not so good in the left upper extremity as in the right. The plantar reflex was normal on the right, increased on the left There was no Babinski reflex The ankle jerk was increased on the left but there was no ankle clonus Vertigo was still present though in much slighter degree than it had been There was no headache and drowsiness was less marked while sleep was good The upper and lower extremities on the left side were still slightly enfeebled

On February 16 the patient was walking better He still held his feet some distance apart, but he walked with a sense of greater security He stood well, with feet together and eyes open or closed He had no headache and less vertigo Drowsiness had disappeared, and he was gaining power in the left arm and leg The pupils were normal The knee-jerk was still increased on the left and normal on the right. The Achilles tendon jerk was slightly more marked on the left than on the right. A slight plantar reflex was present on both sides The patient was now able to walk about the distance of a block, when he was compelled to desist on account of vertigo, which, however, was absent in the sitting posture.

On February 23 the vertigo was practically gone There had been headache for three days at the vertex The upper and lower extremities were still weaker on the left than on the right. The left hand felt heavy There was no undue drowsiness Memory eyesight and hearing all were good. The dynamometric record was 147 on the right 130 on the left The knee-jerk was normal on the right, enfeebled on the left The Achilles tendon jerk was normal on both sides Station was still a little swaying

The patient continued to improve, although some weakness on the left side of the body persisted and he suffered from headache now and again. In June he began to do some work and he gradually increased the amount up to three days a week. During most of the time he took mercuric chlorid (from gr 1/24 to gr 1/12 thrice daily) and potassium iodid (from gr xv to gr 1/50 thrice daily)

The early symptoms in this case—namely, vomiting headache, vertigo and ataxia—at once suggested the possibility of a new growth involving the cerebellum The subsequent development of left hemiparesis, with increase in the reflexes on the affected side, bespoke invasion of the motor tract on the right side The absence of convulsions, of perturbation of consciousness of sensory disturbance, of astereognosis, of mental derangement, pointed to freedom of the cerebral cortex while the absence of changes in the eyegrounds and of palsy of ocular muscles and the escape of other cranial nerves indicated that the lesion must have been one of small dimensions The afebrile course of the illness seemed to exclude an inflammatory process The results of treatment raised the question of a possible syphilitic infection, while the drowsiness—which seemed greater than could have been due to the bromids administered for the relief of the intense headache—pointed in the direction of meningitis or arterial disease

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RUBBER TUBING AS A PERCUSSION HAMMER

A NEW METHOD OF PERCUSSION

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It may seem presumptuous to offer anything new in a field which has been so thoroughly tried as that of percussion, yet I offer what I believe to be a new method and one that possesses superior advantage over methods in common use

Instead of a percussion hammer or finger with which to percuss the chest, I use a piece of rubber tubing four or five inches long and deliver the stroke directly on the surface of the chest It makes a difference in the sound elicited whether a soft elastic tube or one with rigid walls is used, the former gives more or less of a dead sound while the latter emits a note The tubes which I have found most useful are a soft tube with a lumen [illegible] and a piece of [illegible]

bags, with firm walls, not too thick, and a lumen of 3/16 inch

The great difficulty with ordinary methods of percussion is that we rarely elicit the simple tone which should be produced by the underlying tissues, but obtain this tone plus that emitted by the vibrations of the bony thorax With the use of the rubber tubing there is no noticeable thoracic resonance The density of the underlying tissue can be determined readily both by the ear and by the sensation of resistance which is transmitted to the hand When tubes with firm walls are used a tone is transmitted which changes with the density of the underlying part.

This is a valuable method of outlining the heart, the

Fig. 1.—New method of percussion by rubber tubing.

relative and absolute dulness being easily differentiated. Different degrees of infiltration and density in the chest are also easily detected, making this method of value in examining tuberculous chests

One advantage is that the stroke may be made across the ribs as well as parallel to them, because it does not set the chest wall into vibration. Like all forms of percussion, it is most valuable where the least tissue intervenes between the skin and the part percussed, and is less satisfactory over the fleshy parts

Perhaps a smaller, more definite area can be examined by the old method in which the finger or other plexímeter is used and yet when we consider that we can use

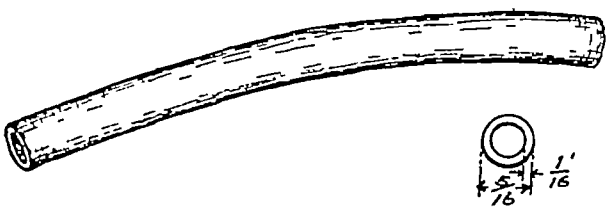

Fig. 2.—Soft flexible tubing with dimensions shown

this method across the ribs as well as parallel to them and can percuss the parts immediately under a rib or under the sternum without setting the bony thorax into vibration, it is doubtful whether the supposed advantage is not more apparent than real I find also that with practice one becomes expert with this method

I have been using the method for over six months and have checked it with ordinary percussion, auscultatory percussion, auscultatory strokings and Ebstein's touch percussion I find it very accurate, in fact, I can often elicit differences by this method that have been passed unnoticed by others

While the old argument in favor of finger percussion, that one always has his fingers with him, still holds good, yet I believe this method is one of greater precision and believe it will pay one who appreciates exact methods to try it

ABSCESS FOLLOWING ABORTION

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DOUGLAS, ARIZ.

This case is reported as illustrating both the serious results that may follow an abortion and the surgical importance of the omentum

History.—Mrs. H., Mexican, age unknown, mother of five children. Family and personal history negative. I first saw the woman June 22, 1906, when she complained of severe pain in hypogastrium She had had a spontaneous abortion, following a family fight, six weeks before, and had been more or less sick since. She had had no movement of the bowels for four days, temperature was 102.5 F., pulse 110 Her tongue was badly coated and breath fetid Urination was frequent and she had vomited once just before my arrival, but the vomitus was not saved I found the patient on the floor on a blanket

Examination.—There was no abdominal rigidity and only slight tenderness just above the pubes Bimanual examination disclosed a slightly enlarged uterus, in normal position with the cervix soft and the os not patulous Ovaries and tubes were negative There was a slight yellowish discharge, but no bad odor

Diagnosis.—Endometritis, following abortion

Treatment.—A saturated solution of magnesium sulphate every hour in two dram doses until the bowels moved freely Codein sulphate, gr. ¼, every three hours for pain

The following day the patient was much better, there was free catharsis, temperature 99.5 F., and the pain was almost gone. There was no tenderness

Second Examination.—I was discharged, but four days later was recalled and found the patient very sick with a temperature of 103.8 F. and a pulse of 130 There was severe general abdominal pain with the facies abdominalis A large tumor mass was seen in the left half of the abdomen, apparently rising out of the pelvis, hard, non movable, rounded, and the size of an adult head There was dulness over the tumor The left rectus was rigid over the tumor and lax above it. There was a smaller irregular tumor mass on the right side, also apparently from the pelvis it was hard to outline and gave a flat note on percussion The right rectus was very rigid Bimanual examination revealed a fixed uterus with slight enlargement. There was bulging of the cul de sac of Douglas Blood count showed leucocytes, 28,000 The patient was ordered removed to the Calumet Hospital

Operation.—This was performed the same afternoon, with the assistance of Drs. Hickman, Tuttle and Lund A median incision was made extending from the pubes to above the umbilicus Immediately on opening the peritoneum there was a gush of pus and fecal material of which about three quarts were removed After thoroughly sponging out the cavity the following condition was found The uterus was bright yellow in color, slightly enlarged, and in normal position The tubes were apparently healthy, except for the peritoneal coat which shared in the surrounding peritonitis The sigmoid was the only gut in the cavity The upper wall of this large cavity was formed by the omentum. The large tumor mass to the left was the small intestines held up by the omentum, which had curled around and below them, and attached itself to the posterior abdominal wall, holding them up and away from the infected cavity The cecum and appendix were also covered The rupture in the gut was evidently in the sigmoid, as this was the only gut in the cavity However, the opening could not be easily found and as the woman's condition was serious we did not search long A puncture wound was hurriedly made through Douglas' pouch and a long fenestrated rubber tube carried through allowing the lower end to project from

the vagina The upper end was brought out of the lower end of the abdominal wound The cavity was packed lightly with gauze strips and the wound closed from above downward with "through and through" stitches of silkworm gut, leaving the last stitches untied The tube and gauze projected through the opening thus left The patient was put to bed in the Fowler position The wound healed nicely and the patient made an uninterrupted recovery, leaving the hospital at the end of the fourth week At the present time her health is perfect and she is now six months' pregnant

The remarkable and fortunate feature of the case was the excellent protection given by the omentum It is my belief that the sigmoid was at first adherent to the uterus and the point of adhesion sloughed, thus causing the perforation

SPINAL INJURIES

GEORGE W KING, M D
HELENA, MONT

Four cases of severe spinal injury have come under my observation in recent years, with about the usual result Of this number two patients sustained a fracture in the middorsal region causing a complete crushing of the cord and as a consequence proved rapidly fatal in twenty-four and thirty-six hours, respectively The third case (Case 1) presents some points of interest

CASE 1.—A miner, aged 45, was working on a platform which gave way, precipitating him some distance His spinal column was forced into a position of extreme flexion, being wedged in a narrow space during the 20 minutes required to free him from the débris

Symptoms.—There was considerable shock and also pain on pressure at the dorso lumbar junction, though no evidence of displacement or of fracture of the vertebræ was found Both sensory and motor tracts of the cord were implicated, there being complete paralysis below the point of the lesion Reflexes were absent, sensation, however, was not entirely lost, the girdle symptom being the only expression of distress manifested by the patient

Treatment.—Laminectomy was suggested but not urged, its utility being a matter of doubt from the extent of the injury and its probable results The patient preferred to take the chances of expectant treatment rather than to submit to an operation A plaster jacket was applied, which served to relieve some of the minor symptoms The usual complications, namely, retention of urine and decubitus, fortunately, were not encountered, an immunity rarely observed in similar conditions The patient was under treatment for one year when he removed to a distant state and was lost sight of His general health was good, but the paralysis of the lower extremities remained as complete as when first noted, absolutely uninfluenced by treatment or time It would be interesting to know whether an early operation would have added anything to his chances of recovery or the reverse

Case 2 is an example of injuries to the dorsal region

CASE 2.—A laborer, aged 25, fell backward from a trestle 25 feet in height, the upper and posterior part of the trunk coming in violent contact with the ground

Symptoms.—There was no loss of consciousness but immediate and complete paralysis of the lower half of the body was noted by the patient on his first attempt to move Pain over the epigastrium accompanied with nausea was marked and was rendered more intense by digital pressure over the sixth dorsal vertebra, where a slight ecchymosis existed An ecchymosed and sensitive area over the posterior angles of the ninth and tenth ribs on the right side, together with bloody expectoration, led to the inference that there had been a fracture of these ribs with contusion or wounding of the lung The full extent of the injury could not be determined by a hasty and superficial examination All movements being painful, further manipulation was avoided The patient was transported three miles in a wagon, causing him extreme suffering Treatment was first directed to the relief of pain and shock, later a leather splint was molded to the back and retained in place by a broad canvas board Retention of urine necessitated the use of a catheter The man was subsequently removed to a hospital and placed on a water bed A gangrenous spot appeared over the sacrum as early as the fourth day, increasing in extent until that bone was laid bare after separation of the slough Repeated trials were made to obtain a radiograph of the injured portion of the spinal column, but with indifferent success, owing to the impossibility of securing a favorable position for the exposure Enough was gained, however, to exclude fracture or dislocation of the vertebræ Examination of the reflexes at this time showed entire absence of sensation in all parts below the distribution of the tenth dorsal nerve There was also partial anesthesia in parts supplied by both ulnar nerves without impairment of motion, indicating that the lower part of the cervical enlargement of the cord had been interfered with to some extent An acute cystitis and a large, sloughing sore contributed to lessen the chances of recovery by the tendency of the former to induce kidney complication, and the latter furnishing an open door to infection

Operation.—On the eleventh day succeeding the injury a linear incision was made from the sixth to the ninth dorsal vertebra and the laminæ of the intervening vertebræ were removed A large clot of blood was found in the spinal canal, the result of profuse extradural hemorrhage About 4 inches of the cord was exposed, its membranes were found intact and presenting a normal appearance Mechanical irritation of the exposed portion of the cord caused jerking of the limbs more pronounced in the left, thus demonstrating that motor conduction was possible through the part supposed to be injured

Post operative History.—The operation did not seriously affect the patient, on the contrary, he stated that he felt much relieved, the girdle sensation was eliminated and the anesthetic area diminished The passage of the catheter now caused some pain for the first time Twenty four hours later he could feel the hand placed on the abdomen and along both thighs, and could even distinguish the different toes when forcibly grasped These encouraging signs, so promptly manifested, were considered favorable to the ultimate restoration of the functions of the cord Contrary to expectation no further improvement was noted, the limbs became atrophied and a gradual and progressive emaciation of the whole body, so commonly observed in spinal lesions, followed The case went on for a month without anything worthy of record, the operative wound healed and the parts over the sacrum showed evidence of healing Retention of urine had not been relieved At the beginning of the fifth week there was a rise in temperature, preceded by a chill, with pain at base of right lung These symptoms were thought to be due to a hypostatic or traumatic pneumonia The patient's condition was critical for three weeks when improvement was noted, the cough abated appetite returned and there was a decided gain in flesh This respite proved to be but temporary, the lung symptoms returned with greater severity finally terminating in gangrene of the affected lung Death occurred three months after the injury

There was nothing to prove or disprove the wisdom of surgical interference in this case Perhaps something was gained by the removal of the extradural clot but so far as the cord itself was concerned enough time had not elapsed to demonstrate any permanent benefit

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Peritoneal Tuberculosis.—Dr Lewis S McMurtry asserts in the *Cleveland Medical Journal* that the symptomatology of peritoneal tuberculosis is so varied that, in its several stages and with diverse local and systemic manifestation the diagnosis is most difficult, and in some [illegible] This is especially true of cases other [illegible] with pulmonary tuberculosis and of [illegible] in which the clinical history is [illegible] lesions afford characteristic

PANCREATIC TREATMENT OF CANCER, WITH REPORT OF A CURE

RICHARD A GOETH, M.D
SAN ANTONIO, TEXAS

When the first reports of the treatment of cancer with trypsin appeared I was greatly interested, as I had a patient with a large, rapidly growing tumor on the side of the neck The condition was inoperable

At first I used solutions of the trypsin powder, making sterile solutions of it and injecting them, but abandoned them as soon as I got the injectio trypsini, put up by Fairchild Brothers I found that the directions for the treatment as published in THE JOURNAL[1] by Dr John Beard, the discoverer, cover every detail Though the injections of trypsin were rather painful, I used injections of cocain in a few instances, but found that they did not diminish the pain materially

CASE 1.—This patient was a man with a large vascular tumor, undoubtedly a sarcoma, on the side of the neck. Although the trypsin treatment is supposed to give good results in these cases I failed to check the growth of this tumor, and the patient discharged me to be operated on by another physician I have learned since that he bled to death the same day he was operated on.

CASE 2.—This patient was an elderly woman with cancer in both breasts and secondary cancers in the glands on one side of her neck, preventing her turning her neck. She was too feeble to walk when I started to treat her and she showed no improvement under the treatment In this case I discontinued the treatment for some time before her death

CASE 3.—This patient was a woman a little over 70 years of age She had a cancer in the face which had destroyed one eye and extended into the antrum of Highmore and one side of the nose. At first the use of the lotio pancreatis and trypsin increased the size of the lesion in her face to an alarming extent However, at the end of one month when I began to use the injectio amylopsini alternately with the injectio trypsini she began to improve at once and the lesion in the face began to heal rapidly until the eye cavity and the rest of the wound had a healthy skin over it I began to treat this patient on Nov 1, 1906, and continued the treatment until the middle of January, 1907 Her general health has improved markedly and the cancerous cachexia has given way to a healthy color at least as healthy as may be expected for a woman of this age She is now able to do light housework all day

CASE 4.—This woman, whom I am treating at present, has a cancer in one breast with secondary nodules in both axillæ and around the diseased breast I began the treatment in this case about the beginning of January, 1907, and have had the same experience as in the previous case, i. e., there has been considerable sloughing of the cancerous tissue, producing a wound a little larger than a hen's egg Every gland that was infected with the cancer has become intensely inflamed and painful and the entire tumor mass is sloughing away rapidly I am now using the injectio amylopsini on alternate days with the injectio trypsini and the pain has been greatly relieved

Microscopic Findings.—I had an opportunity to obtain a small piece of the tumor, and sections of this were most interesting microscopic studies While I am not an enthusiast or a crank on the subject, I have had some experience as a pathologist, and I saw plainly that the cancer cells were broken up so that it was hard to find an entire cancer cell and the stroma of connective tissue was as intact and uninjured as any sound sections of cancer might show it Therefore, I have reached the conclusion that the pancreatic treatment attacks the cancer cells only, which accounts for the shriveling and contraction of the tumor under this treatment

Result.—This patient is recovering from all the bad symptoms, and I feel sure that it will be my second cure in a short time Even now I consider her cured, as her general health is improving daily The patient told me to-day that she felt much better all the time However, up to this time she has had no faith in the treatment, and only came to me because the Roentgen ray treatment had failed completely and her case had progressed until it was entirely inoperable on account of the secondary deposits of cancer

In every case I have treated the tumor became inflamed as a result of the injections, although I kept the injections as far away from the tumor as possible I believe the remedy will be used in much larger doses in future, as the trypsin itself is not poisonous and can be injected in indefinite doses into a healthy person The size of the dose would then only be regulated by the amount of pain it produced in the tumor and the fever and weakness resulting from the reaction and the absorption of disintegrated cancer

1 THE JOURNAL A. M. A. Feb 17 1907 p 544

A CASE OF PRIMARY CARCINOMA OF THE BILE DUCTS, WITH AUTOPSY

B O LE BLANC, M.PH., M.D
ST GABRIEL, LA.

Patient.—Mrs H. B., aged 71, a rather spare person, active and energetic.

History.—The patient had scarcely ever had a day's sickness in her life up to the present illness The family history was excellent, except that one sister died of carcinoma of the uterus some years previously The present illness began with malaise, slight jaundice, and an evening rise of temperature, about 100 101 F This was treated as an ordinary catarrhal jaundice of malarial origin, but the symptoms gradually grew worse Dr. A. A Allain, of Bayou Goula, saw the patient at this time and recognized some serious trouble I first saw her in consultation with him, then together throughout the case

Examination.—The skin was deeply jaundiced Heart, lungs and kidneys were normal, but analysis revealed an abundance of bile in the urine Microscopic examination of the urine showed only bile pigments, no blood Liver dulness was not much increased in the mammary line and there was but slight tenderness A distinct, movable mass could be felt in the right hypochondrium which was made out to be a dilated gall bladder There was another small mass to the left of the umbilicus resembling an enlarged gland The stools were almost white, showing there was complete obstruction to the flow of bile The patient became rapidly emaciated, the temperature ran a steady course ranging from 99 to 102 F, and resisted all treatment A microscopic examination of the blood was made with negative results

Diagnosis.—A diagnosis of cancer of the bile ducts was made Dr P E Archinard of New Orleans, concurring The patient gradually sank into coma and died from cholemia There was no pain at any time, either during or before the illness, that in any way suggested the presence of gallstones Except for the particular site of the cancer the patient would probably have had a few months' lease of life, but as there was complete obstruction and the cancer was small, the patient had all the symptoms of cholemia She died within eight weeks of the onset.

Autopsy.—The body was emaciated and intensely jaundiced All the intestinal organs were bile-stained, the gall bladder was much enlarged, a tongue from the liver came down and partly covered the gall bladder The liver was a little enlarged and colored dark green, it was smooth, showed no metastatic abscesses nor nodular masses The spleen was very small and shriveled The contents of the gall bladder were examined The first fluid escaping was clear, then, as the contents drained, it became dark brown in color and mushy in consistence The hepatic duct was found to be as large as the middle finger A mass was found at the entrance of the common bile duct into the duodenum and involving the head of the pancreas and the ampulla of Vater A piece of the mass examined microscopically proved to be carcinomatous

New and Non-Official Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NON-OFFICIAL REMEDIES" THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY

(A list of all accepted articles is published on one of the advertising pages of The Journal in the first issue of each month)

(Continued from page 948)

IODO-MANGAN

LIQUOR FERRO-MANGANI IODOPEPTONATI "DIETERICH"

Iodo-mangan is Ferro-mangan Dieterich with the addition of 0.45 per cent. of iodopeptone. Iodopeptone contains 15 per cent. of iodine.

The process of preparation is the same as that given under Ferro-mangan Dieterich with the addition of a solution of iodopeptone.

Iodo-mangan is a clear dark brown liquid of agreeable odor and taste and a slight acid reaction.

Method of Valuation.—After determination of the percentage of iron and manganese a test method should be employed as described by Dr. Karl Dieterich in Helfenberg Annals, 1901, pages 162-165, to ascertain the percentage of halogens in Iodopeptone. *About 0.5 Iodopeptone to be thoroughly mixed with a few grammes of a mixture of 1 part potassium nitrate and 2 parts sodium carbonate either in a porcelain or platinum crucible. The mixture is then covered with a light layer of sodium carbonate, covered and carefully heated until reaction sets in. When finished a little potassium nitrate is added to obtain a smooth flux then the molten mass is exposed to glowheat for about 15 minutes. After cooling it is dissolved in hot water, rinsed into a beaker, filtered if necessary, acidulated with diluted acetic acid and any Iodate reduced with sulphurous acid. The excess of acid is driven off by heat, the liquid strongly acidulated with nitric acid again heated until the gas formation ceases, then precipitated while hot with silver nitrate. The silver Iodide is collected on a weighed filter, washed with very dilute ammonia water, as the preparation contains hydrochloric acid, dried and weighed.*

Actions and Uses.—It is claimed to be a reconstructive tonic and blood making adjuvant, with favorable action in all affections of the glandular system.

Iodo-mangan is said to be useful in scrofulosis, rheumatism, etc.

Dosage.—4 to 16 Cc. (1 to 4 fluidrams), according to age, three times a day.

Manufactured by Chemische Fabrik Helfenberg A. G. near Dresden, Germany (Reinschild Chemical Co., New York.) No patents. U. S. trademark applied for.

QUININE LYGOSINATE

CHININUM LYGOSINATUM

Quinine lygosinate, $CO(CH{=}CH{-}C_6H_4{-}C_{20}H_{24}N_2O_2)_2 = C_{67}H_{60}N_4O_5$, is a quinine compound of dioxy-dibenzal-acetone.

It is prepared by the reaction of quinine hydrochloride with sodium lygosinate.

Quinine lygosinate is a fine orange yellow amorphous powder melting at 114° C. (237.2° F.), having a faintly aromatic odor and a bitter taste which is gradually developed on account of its sparing solubility in water. It is slightly soluble in water, soluble in 6 parts of alcohol, in 20 parts of hot oil and readily soluble in chloroform and benzene. It is decomposed by acids and alkalies. It contains 70.8 per cent. of quinine.

Burned on platinum foil quinine lygosinate develops the odor of bitter almonds and leaves no residue. Its alcoholic solution dyes cotton gauze a bright yellow color, which becomes red brown on drying.

If 1 Gm. quinine lygosinate is shaken with 20 Gm. of 20 per cent. sodium hydroxide solution and extracted twice with 10 Gm. of ether the quinine remaining after evaporation of the ether should not weigh less than 0.7 Gm. If the alkaline solution thus obtained be acidified lygosin separates as a thick yellow precipitate.

It is incompatible with acids and alkalies.

Actions and Uses.—It is stated that this preparation is capable of preventing completely the development of cultures of staphylococcus. Given to rabbits by mouth in doses of 1 Gm. pro kilo of the body weight it is said to be entirely harmless. It is a styptic claimed to be useful in parenchymatous hemorrhages and free from unfavorable side effects, such as cauterization of the wound surfaces.

Dosage.—It is employed as a dusting powder, in bandages, gauzes, suppositories, in the form of court plaster and in glycerin suspensions.

Manufactured by Vereinigte Chininfabriken Zimmer & Co., Frankfort a. M., Germany (C. Bischoff & Co., New York.)

SODIUM LYGOSINATE

LYGOSIN SODIUM

Sodium lygosinate, $CO(CH{=}CH{-}C_6H_4ONa)_2 + 7H_2O = C_{17}H_{12}O_3Na_2 + 7H_2O$, is the sodium salt of dioxy-dibenzal acetone.

It is prepared by condensation of 2 molecules of salicylic aldehyde with 1 molecule of acetone and combining the product with sodium.

Sodium lygosinate occurs in glossy greenish prisms soluble in 16 parts of water at 18.4° C. (67.12° F.) or in about 9.5 parts at 37° C. (98.6° F.). It is soluble to the extent of 1 per cent. in cold alcohol, easily soluble in hot alcohol and in glycerin. Its aqueous solution has a ruby red color and is alkaline in reaction.

On ignition 1 Gm. of sodium lygosinate leaves a residue of sodium carbonate weighing 0.243 Gm. From the aqueous solution acids precipitate a thick yellow precipitate of di-ortho-cumar ketone. The solution is fairly stable when kept in a cool place protected from the air and is not decomposed on boiling, but is decomposed by weak acids even the carbonic acid of the air.

Actions and Uses.—The powder causes sneezing. Sodium lygosinate is said to possess a germicidal power similar to that of the silver salts, slightly weaker, but practically non-irritant.

It is claimed to be useful in gonorrhea, especially of the uterus.

Dosage.—Injections of a 3 to 8 per cent. solution daily or every second or third day.

Manufactured by Vereinigte Chininfabriken Zimmer & Co., Frankfort a. M., Germany (C. Bischoff & Co., New York.) German patent No. 110,521. U. S. trademark No. 40,177.

VERA DIASTASE

A ferment of high diastasic power obtained from the pancreatic gland of the pig.

Vera diastase is a light yellowish white powder having a faint odor and a somewhat mucilaginous taste, not entirely soluble in water owing to the presence of a small amount of proteid matter. The diastasic principle, however, is completely soluble, so that its solutions may be filtered without loss of activity.

It is incompatible with strong alcohol, alkalies, acids and other substances generally incompatible with ferments.

It is claimed to digest 150 times its weight of starch when tested according to the method of Blome (*Pharm. Rev.* 1906, vol. 24, p. 260), substantially as follows:

A definite quantity of a 0.1 per cent. solution of vera diastase in water containing 25 per cent. of glycerin is added to 50 Cc. of a 2 per cent. solution of potato starch in water and kept at 40° C. for three hours, the mixture being thoroughly stirred with a spiral glass rod once in ten minutes. At the end of the digestion period the mixture is poured into a boiling mixture of 50 Cc. of water and an equal volume of Fehling's solution. The container and stirring rod are washed at once several times with boiling water and the washings added to the mixture and boiled. The cuprous oxide is then filtered by suction through asbestos in a Gooch crucible, dissolved in hot dilute sulphuric acid containing 1 or 2 Cc. of nitric acid and electrolized, the metallic copper being deposited on platinum electrodes. The maltose and dextrose equivalents of copper are taken from H. Allihn's tables.

Actions and Uses.—Vera diastase is recommended by the manufacturers as a digestant of starchy food in amylaceous dyspepsia and derived complaints.

Dosage.—0.130 Gm. (2 grains) or more.

Manufactured by Frederick Stearns & Co., Detroit, Mich. Not patented. Registration of trademark pending.

(To be continued)

Naming of Carbon Compounds.—Ethylidene is the divalent radicle $CH_3CH^{=}$; thus 1,1 dichlorethane is also call. l ethylidene chlorid or ethidene chlorid. The term has also been used to indicate the radicle $CH_3C^{=}$; thus chloral $CCl_3{-}CHO$, has been called trichlor ethidene aldehyd.—*Pharm.*

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[For other information see second page following reading matter]

SATURDAY, MARCH 23, 1907

THE "ALKALINITY" OF THE BLOOD

Until recently our knowledge of the character of the chemical reaction of the blood was very imperfect and inexact, and at present the more precise information which has been obtained through physicochemical studies seems to be possessed by few except those engaged particularly in physiologic research and teaching The ideas of too many physicians regarding this vital question are limited largely to reminiscences of statements in the older text-books of physiology, to the effect that the blood is "amphoteric" in reaction, because with some indicators it reacts as if alkaline, whereas with others it reacts as if very faintly acid It is not unusual to see statements in current literature to the effect that in certain diseases the alkalinity of the blood has been found to be reduced, and that it is important for the maintenance of resistance to infection that the alkalinity of the blood be kept at a certain normal figure

As a matter of fact, however, the blood is not appreciably alkaline at all, strictly speaking The real alkalinity of a fluid depends on the number of hydroxyl ions (OH ions) free in it, and the number of free hydroxyl ions in the blood is so small that the most exact methods of physical chemistry fail to demonstrate that blood serum contains more of these ions than does the purest specimen of distilled water Indeed, it is absolutely essential for the animal organism that the blood serum always remain at very near the neutral point, for animal cells seem to be extremely sensitive to the influence of free ions, whether positive (H) ions or negative (OH) ions The most minute quantities of free ions of either kind cause profound alterations in the function and morphology of all animal cells with which they come in contact, always with fatal effects if the ions are at all numerous Consequently, we find that although the blood plasma is constantly exposed to possibilities of change of reaction through the addition of various sorts of products of cellular metabolism, yet under all conditions the number of free H and OH ions is kept at a most minute point and always nearly balancing one another This property of the blood to preserve almost exact neutrality under all conditions depends on an elaborate mechanism of defense, consisting on the one hand of the eliminatory organs which modify the composition of the blood according to the nature of the fluid they excrete, and on the other of the proteids, the phosphates and the carbonates of the plasma The latter have the property of forming, in the case of proteids, compounds with the free ions which do not readily dissociate, and hence reduce the number of ions, in the case of the carbonates and phosphates, dissociation results in the liberation of both H and OH ions, and hence the tendency of either variety to accumulate in excess is depressed

The puzzling phenomenon that with some indicators the blood appears to be alkaline and with others acid, does not mean that the blood is either acid or alkaline, much less that it is both It depends, rather, on the nature of the indicators employed, for some indicators change their color when in the presence of a minute quantity of free hydrogen ions (e g, phenolphthalein), while others change color in the presence of minute quantities of hydroxyl ions, although relatively little affected by free hydrogen ions It thus happens that some indicators will show evidence of the presence of free hydrogen ions even where bases may be present at the same time to which they do not react, e g, phenolphthalein reacts to the acidity of the dilute solution of carbonic acid present in the blood, whereas other indicators (e g, litmus) are not affected by the small number of free hydrogen ions in the blood, but react to the weak bases there present and suggest that the blood is of alkaline reaction Consequently, if we titrate the blood against a very dilute acid until one of the latter class of indicators shows a neutral or beginning acid reaction we find approximately how much basic material the blood contains with which to defend itself against actually becoming acid Conversely, we can learn something as to how much defense against alkalies the blood possesses by titrating against alkalies with phenolphthalein for an indicator As can be seen, this is a very different matter from determining the acidity or alkalinity of a simple solution of acids or bases, and the distinction must be understood by anyone wishing to consider for any purpose the reaction of the blood or other body fluids that contain proteids, phosphates and carbonates

The theories of the action of indicators and the principles of the chemical reaction of the blood are both concisely discussed in their relation to one another in a recent article by Moore and Wilson,[1] to which the reader seeking further information is referred These authors have devised what seems to be a practical clinical method for studying the power of the blood to maintain its normal neutrality, or, as they call it, the "reactivity" of the blood This method is based on the principles outlined above, and while not attempting to measure the almost negligible degree of free alkalinity, it does indicate clearly the exact range of reactivity possessed by the blood and shows how much of this property depends on the blood proteids and how much on the inorganic con-

1 Biochemical Jour 1906 vol 1 p 297

stituents This method should afford some interesting information if applied to large series of cases of different diseases The chief result so far obtained by Moore and Wilson is that in cancer the basic reactivity (i e., the power to neutralize acids) is constantly increased, apparently depending on an increased power of the blood proteids to bind acids It will be interesting to learn if the older ideas of the deficiency of the blood in alkalinity in patients with infectious diseases, nephritis and wasting diseases are substantiated by this new method

THE INDUSTRIAL DEATH ROLL

In a recent number of a magazine[1] devoted to sociological questions there is an interesting discussion on the subject of industrial accidents in the United States, their increasing frequency, and the almost total lack of legislation for their prevention and for compensation of the victims Nowhere is the contrast between this country and Europe more striking than in this matter of industrial accidents While England, Germany, France and Holland have all lowered their death rate from this cause we have not even begun to count ours We have no data which can be regarded as even approximately complete, for the majority of non-fatal accidents are never reported at all and the fatal ones are reported only in part There are only ten states which attempt to secure statistics of industrial accidents, and their figures are of little value, for in one state only[2] is the reporting of accidents compulsory There is no agreement as to what constitutes an accident and there are no statistics as to the number of men employed in each individual industry We are dependent, therefore, chiefly on the reports of insurance companies and workmen's societies, from which sources, unsatisfactory as they are, we can gather confirmation of the universal impression throughout the country that these accidents are not diminishing but increasing in numbers, and that the public is forced each year to assume the expense of a greater number of killed or incapacitated workmen

In the one field of industry in which accidents are recorded railroading, the death rate apparently has gone up to a startling degree While the number of men employed by the railroads has not doubled since 1889 the number of employés killed by them has trebled In mining and in the great iron and steel mills two factors have tended to increase the danger to life and limb namely the increased use of machinery and the employment of foreigners who can not understand the orders given by English speaking foremen John Mitchell estimated that 11,986 men were injured or killed in mines in 1904 A coroner in Allegheny county said recently that the number of deaths by accident in the Pittsburg mills is appalling 'The life of a foreigner employed in the mills is given less consideration than is the life of a horse or mule"

Governor Hughes of New York recently stated[1] that the number of industrial accidents in the United States has been estimated at over 500,000 annually and much of this sacrifice of life and productive efficiency is both useless and preventable The preventable accidents are said to be due to carelessness in the use of explosives, unguarded or defective machinery, "speeding up" and exhausting hours of work In Chicago last year 156 out of the 1,358 men in the Bridge and Structural Iron Workers Union were killed or disabled, most of the casualties being due to insecure scaffolds and flooring or to falling beams We have ten times as many deaths from boiler explosions as England has among an equal number of workmen

It is undoubtedly true that the American workman is more ready to take risks and to chafe under restrictions than is his European brother, but this is not enough to account for the fact that the United States alone of the civilized nations has an increasing death rate from accidents As the magazine previously mentioned says The cause may be found partly in the lack of a proper insurance system We are the only nation of industrial importance which leaves the question of proper compensation for accidents to be fought out between employers' insurance associations and personal injury lawyers If the former win the community must assume the support of the maimed workman or of his family if he is killed If the workman wins a lump sum is handed over to him most of which goes to his lawyers, and the remainder is seldom of lasting benefit to a man unused to handling sums larger than his weekly wage In the end he, too, is apt to become a burden on the community

Every physician who has worked in the public hospitals or dispensaries of our larger cities, to say nothing of the physicians employed by railways and factories, knows that the death roll of industry is terribly high and the number of disabled still higher In one way or another, through private charity, hospitals orphanages, asylums and poorhouses, the community finally assumes the charge of those who fall in the industrial conflict It seems only reasonable to demand that the industries in which these calamities occur should help to bear their cost a demand which has been crystallized into law in every industrial nation save our own Germany has a compulsory insurance system the cost of which is divided between the state, the employer and the workman The British prefer a law which compels the employer to indemnify an injured workman for loss of wages due to an accident unless it can be shown that the workman was clearly [illegible] that the cost of used-up [illegible] of used-up machinery—[illegible]

1 Charities and the Commons Feb 2 1907

2 Wisconsin requires every accident to be reported which temporarily or permanently incapacitates the recipient for work

1 At the opening of the Division and Industrial Hygi

ORIGINS OF TUBERCULOSIS

Twenty-five years ago nearly all physicians believed tuberculosis a hereditary disease Now nearly everyone considers that heredity plays at most a minor rôle and that the disease is acquired in the great majority of cases , The problem now at issue is how it is acquired Koch declares that it is practically always due to the inhalation of germs from other human beings who have tuberculosis, while von Behring proclaims quite as confidently that it is due to milk infection

In a recent article[1] von Behring reiterates this statement and insists that practically only such individuals acquire tuberculosis as have had the germs of the disease brought into their bodies with the milk in childhood These milk bacilli work their way through the digestive organs and lymphatics into the blood and finally, he asserts, the lungs become infected from the blood "Even such tubercle bacilli as are inhaled with the air through the larynx into the lungs, or such as produce infection in the mouth and nostrils, do not act directly on the lungs nor find their way into them by any continuance of process, but always go around by way of the lymphatics or blood vessels before reaching the lung" The report of the British Royal Commission on Tuberculosis does not use such strong terms, but it expresses the opinion that cows' milk is responsible for tuberculous infection in a large number of cases

While Koch regards infection in adults as the most potent cause for the origin of phthisis, von Behring maintains that the infection occurs in childhood Even in cases in which tuberculosis occurs at a much later period in life, he asserts that it is the result of germs acquired in infancy through the medium of mother's milk, the nurses' milk, and, most frequently of all, through cows' milk This is not so different from previous opinions as might be thought if it is remembered that the Germans have a proverb that we are all a little tuberculous, and statistics have shown that considerably more than one-half of all those who die from other diseases present a tuberculous lesion in their lungs at autopsy, though they have never shown any signs of the disease This would seem to indicate that most people had acquired the disease at an early susceptible period, but had been saved from its severe ravages by that tendency to cure which exists in most human beings, if Nature is only given a proper chance, and which constitutes the most encouraging feature in the present crusade against this disease Cornet[2] in the second edition of his book on "Tuberculosis," just issued, adheres to the old view that germs are inhaled directly into the lungs The principal reason for this contention on his part is that since coal, marble and various other dust particles gain entrance by the respiratory tract, why should we assume a different, round-about, and at present, at least a more problematical, route for the tubercle bacillus In some cases infection may occur by way of the digestive tract, tonsils, or lymph paths, but by far the great majority of cases occur from inhalation

The fact that authorities like these quoted are divided is the best proof that we do not yet know the exact mode of infection in this disease, and emphasizes the necessity for even greater care with regard to the food, habits and environment of children In the meantime there is plenty of room for study and abundant opportunity for the gaining of prestige by any progress that may be made in solving this problem There is here an excellent chance for young American physicians to accomplish original work of high order that will be rewarded by fame and will redound gloriously to the honor of American medicine

1 The Independent New York March 7 1907
2. Die Tuberculose Vienna Hölder 1907

ADDITIONAL BUILDING FOR THE HYGIENIC LABORATORY

The Hygienic Laboratory of the U S Public Health and Marine-Hospital Service is an institution that is doing splendid work in the interest of public health Started in New York in 1887, it was moved to Washington in 1891, and in 1901 Congress appropriated for it five acres of ground on the site of the old Naval Observatory, overlooking the Potomac river and adjoining the Naval Medical School Since these facilities were secured for the laboratory its work has been broadened, and to-day it is the most important of any work undertaken by the Government as far as the health of the people is concerned When the present building was erected in 1902 the work of the laboratory was confined to pathology and bacteriology Since that time zoology, pharmacology and chemistry have been added by law Naturally, with the broadening out of the work there has come the need of larger and better buildings, since the growth of the laboratory during the last five years has greatly overcrowded the present facilities All persons interested in the maintenance of public health will rejoice, therefore, that the last Congress made an appropriation of $75,000 for a new building, which will be a replica of the first, in accordance with the plan looking to a harmonious group of buildings as the institution may develop

WISCONSIN'S MEDICAL LAW IN OPERATION

The last legislature of Wisconsin, thanks to the club wielded by a subsidized press, failed to pass the bill controlling the sale of "patent medicines" in that state It did, however, so modify its medical practice law as to grant to the State Board of Medical Examiners the power to bring about the repression of fraudulent and indecent advertising by fake medical concerns and quacks We have read[1] with much satisfaction that a notorious concern of Milwaukee, which for years has polluted the city and country press of Wisconsin with its flamboyant and indecent advertisements, has at last been brought to time The "Wisconsin Medical Institute," *alias* the "Milwaukee Medical Institute," *alias*

1 Wisconsin Medical Journal January 1907

"The Master Specialist' has been enjoined from pursuing its questionable business and warrants have been issued for the arrest of its president and its secretary-treasurer As our contemporary says, it is to be hoped that the prosecution of this concern will be as successful as its importance demands and that the "Institute," in spite of the support which it will doubtless receive from the newspapers, will be put permanently out of commission Wisconsin is to be congratulated on having men on its medical board who are alive to the best interests of the public and the profession

THE PHYSICIAN AS TEACHER.

Physicians are acknowledging a duty to contribute whatever there is in the science and art of medicine for the general welfare, and this in a way apart from the customary office and consultation practice Such among them as have the aptitude are lecturing and writing on the prevention of disease, hygienic and physiologic laws, the influence of heredity, the essential facts concerning tuberculosis—by far the most death-dealing of all agencies—and many other topics concerning individual and communal health Such lectures are being given by members of the faculty of Harvard Medical College, and under the auspices of the New York Academy of Medicine, Chicago Medical Society and other county medical societies, as well as the New York Board of Education and other organizations that could well be mentioned That these contributions to the common weal are very valuable indeed, no one can question who reflects that there is really nothing in the whole range of human possession so precious to a man as his health No nation can rest secure which has not some regard for the sanitary essentials by which the public health must be safeguarded One of the most salutary ways in which our profession can help the community is in demonstrating the application of scientific principles to the ordinary humdrum affairs of everyday life Science is only another term for trained and orderly common sense, and there is probably nothing more needed by the people of the United States to-day than the application of such science to their affairs, both personal and communal Never perhaps has any nation possessed so much knowledge and so little wisdom Never has there been such riotous jumping to false conclusions from unfounded, or half-examined ridiculous, irrelevant or untruthful data, never so much false reasoning from absurd and ill-related analogies Let him who considers this statement far-fetched observe the many "faith cures' and other charlatanries so rampant at the present day

RELATIONS OF MATERNAL AND FETAL CIRCULATIONS.

The case reported by Corrigan last week,[1] in which methylene blue was given to a woman during the last six months of her pregnancy, is of interest both in regard to the composition of the liquor amnii and the action of the kidneys of the fetus *in utero* In the amniotic fluid no coloring matter was noticed while the urine passed after birth by the infant contained methylene blue Similar observations have been made by others Thus Gusserow administered benzoate of soda to the mother and it appeared as hippuric acid in the urine of the newborn child Schaller in 1899 gave phloridzin and examined the fetal urine and amniotic fluid at various periods of pregnancy He found that there is no regular secretion and periodic excretion of fetal urine even near to term, but that fetal renal activity usually begins when the process of labor induces changes in the fetal circulation, though urination is rare during labor Such observations have been responsible for the prevailing belief that the amniotic fluid is mainly derived from the mother Additional support is derived from the analysis of the fluid itself, it being found to contain an infinitesimal proportion of the constituent salts of the fetal urine Moreover, cases of imperforate urethra are not necessarily associated with deficient liquor amnii, nor even with distension of the bladder for though this may be found, Joulin has shown that in the majority of cases it does not exist It is highly probable that fetal waste products escape through the placenta into the maternal circulation, and it may be that variations in the activity of the fetal kidneys depend on the manner in which the placenta performs its function The chorionic epithelium is probably concerned with the performance of various vital processes, e g, selection, elaboration, excretion and even digestion, which are all the more complex, because it determines transmission from mother to fetus and from fetus to mother It is this double rôle which makes the placenta one of the most remarkable structures in the human organism

1 THE JOURNAL A. M. A., March 16, 1907, p. 946.

LET THE PRESCRIBER KNOW

The specious argument has been advanced by the nostrum defenders that if the ingredients of "patent medicines" must be declared to the laity the prescriptions of physicians should also be given in English so that the patient may know what he is taking This is a most ingenious sophistry The medical profession has never suggested that "patent medicines' should be labeled so that the *patient* may know what he is taking The whole basis of this agitation against secrecy is that the *prescriber* must know what he is giving When a person employs a physician the latter is the prescriber, and he should know the composition of every medicine he uses, but if this person prescribes for himself he is the prescriber and should know what he prescribes Now if a physician's prescription is to be passed about among the laity we agree that it should have the English equivalents in order—we repeat—that the prescriber may know what he is using If the public decides that it will take in its own hands a certain portion of the prescribing that is done then the public owes it to itself to be better informed as to the contents of the remedies used and not to depend on false statements made in advertisements and on wrappers simply to sell the goods

Medical News

ALABAMA.

Money for Medical Department.—The lower branch of the legislature on February 20 passed a bill appropriating $1,673,000 to further the interests of education. Of this the Medical College of Alabama, Mobile, is to receive $65,000.

ARIZONA

Personal.—Dr. Charles H. Jones, Tempe, has been seriously ill with influenza.——Dr. Charles F. Hawley, Mesa, has removed to Bisbee.——Dr. D. D. Whedon, Tucson, has been appointed physician of Pima County.

Election.—At a meeting of the Cochise County Medical Society, held at Bisbee, March 2, the following officers were elected: President, Dr. Fenn J. Hart, Bisbee, vice presidents, Drs. Charles L. Caven, Bisbee, John E. Bacon, Tombstone, and James J. P. Armstrong, Douglas, secretary-treasurer, Dr. Edward S. Godfrey, Jr., Lowell, and censor, Dr. George A. Bridge, Bisbee.

ARKANSAS

Do Not Want Names Published.—At a recent meeting of the Jefferson County Medical Society, the members of the society were urged to refrain from having their names published in connection with cases in which they are interested.

Nostrum Law.—The Patterson bill, which requires every proprietary remedy sold in the state to have its formula printed on the label, was so amended by the committee on public health as to extend the provisions of the bill to physicians' prescriptions, the only requirement being that prescriptions must be written in English.

Society Meeting.—The physicians of Walnut Ridge and Hoxie recently organized an association at the former place and elected the following officers: President, Dr. John E. Pringle, Hoxie, vice-president, Dr. Ed. T. Ponder, secretary, Dr. John C. Land, and treasurer, Dr. John C. Hughes, all of Walnut Ridge.

Epidemic Diseases.—Smallpox is reported to be prevalent in Fort Smith.——There are several cases of smallpox of mild type at Piggott.——Scarlet fever is prevalent at Pine Bluff. Most of the cases are of a mild type and no fatalities have been reported. An order was issued by the board of health instructing the city officials more rigidly to enforce the scarlet fever quarantine.

CALIFORNIA.

Hospital News.—Drs. John H. Mallery and Edward J. Hill, Eureka, and Charles W. Mills, Arcata, have opened a hospital for women and children in Eureka.——The executive board of the San Francisco Relief Corporation, March 8, made an appropriation of $10,000 to St. Mary's Hospital.——Oakland Central Hospital has been incorporated by a number of physicians who plan to erect a building to cost about $60,000.

Personal.—Dr. Albert C. Winn, Tomales, who has been seriously ill with septicemia, is convalescent.——Dr. I. M. Dudley Fulton, Los Angeles, has returned from Germany.——Dr. Harris Garcelon has been appointed city health officer, and Dr. Ethel L. Leonard city bacteriologist of Los Angeles.——Dr. Charles F. Millar, for seven years chief of staff of the Emergency Hospital, San Francisco, has resigned on account of ill health, to take effect April 1.——Dr. Reuben C. Hill of the Emergency Hospital service, San Francisco, narrowly escaped death by suffocation at the Harbor Hospital, March 3.

CONNECTICUT

Asks Provision for Epileptics.—Among the important recommendations made to the General Assembly by the State Board of Charities is one asking that special provision be made for the care of sane epileptics of any age.

Tuberculosis Hospital.—Two bills have been introduced in the legislature regarding the Hartford Tuberculosis Hospital. One appropriates $50,000 for the two years ending Sept. 30, 1909, and the other provides that $6 per week shall be paid by the state for each patient under treatment.

Personal.—Dr. Henry F. Stoll, Hartford, has been appointed medical director of the Hartford Life Insurance Company.——Dr. Thomas G. Alcorn, Thompsonville, has been appointed a member of the medical staff of the Springfield Hospital.——Dr. Frederick G. Graves, Waterbury, was seriously injured in a recent collision between his carriage and that of Dr. Joseph N. Bellmare.——Dr. Mark S. Bradley, Hartford, has been appointed assistant medical director of the Connecticut Mutual Life Insurance Company.

Vital Statistics.—During January 1,679 deaths occurred in the state, equivalent to an annual mortality of 20.2 per 1,000. The deaths numbered 198 more than in December, 339 more than in January of last year, and 322 more than the average number of deaths for the five years preceding. Infectious diseases caused 307 deaths, or 18.2 per cent. of the total mortality. The chief causes of death were: Pneumonia, 276, nervous diseases, 168, heart disease, 166, consumption, 153, and influenza, 136. Infectious diseases were reported as follows: Smallpox, one case, measles, 219 cases in 38 towns, scarlet fever, 193 cases in 40 towns, cerebrospinal meningitis, 2 cases in one town, diphtheria, 185 cases in 37 towns, whooping cough, 145 cases in 23 towns, typhoid fever, 41 cases in 18 towns, and consumption, 47 cases in 17 towns.

Society Elections.—At a meeting of the New Haven Medical Society the following officers were elected: President, Dr. Henry W. Ring, vice presidents, Drs. Edward M. McCabe and Louis M. Gompertz, secretary, Dr. Edward R. Whittemore, and treasurer, Dr. Robert E. Peck.——At the annual meeting of the Waterbury Medical Association Dr. John D. Freney was elected president, Dr. Charles W. S. Frost, vice president, and Dr. Edward W. Goodenough, secretary treasurer (re elected).——At the annual meeting of the Norwalk Medical Association Dr. Frederick B. Baker, South Norwalk, was elected president, Dr. William J. Tracey, Norwalk, vice president, and Dr. Henry C. Sherer, South Norwalk, secretary treasurer.——At the annual meeting of the Celtic Medical Society, held at Waterbury, Dr. Edward W. McDonald was elected president, Dr. Bernard A. O'Hara vice president, Dr. John D. Freney, secretary, and Dr. John F. Hayes, treasurer, all of Waterbury.

DELAWARE

Medical Practice Act.—The state senate, on March 12, considered the new medical practice act which had already been passed by the house. This act takes the place of the medical practice act passed April 18, 1895, and amended in 1899. It provides that all persons desiring to practice medicine and surgery in the state shall be examined and licensed by the State Board of Medical Examiners and that no person not so licensed shall attend the sick in any way for compensation. This clause of the bill was strenuously opposed by the Christian Scientists of Delaware, a number of whom presented arguments against the bill before the senate. After hearing them, as well as the representatives of the State Board, and of the medical profession, the bill was unanimously adopted.

DISTRICT OF COLUMBIA

Registration of Consumptives.—The House District committee has voted to report favorably on the bill requiring registration of all cases of tuberculosis. The Senate District Committee is also said to favor the passage of the measure.

Tuberculosis Hospital.—Bids have been received by the commissioners of the District for the construction of the tuberculosis hospital for which $100,000 has been appropriated, $80,000 of which is to be used for purposes of actual construction.

Dispensary Moved.—The Free Dispensary for Consumptives has been moved to the new building of the Associated Charities Commission at 923 Eighth St., N. W. Clinics are held on the first four afternoons of the week from 2 to 3 and on Friday evening from 7:30 to 8:30.

Personal.—Dr. Francis B. Loring has been appointed local oculist for the Baltimore & Ohio Railroad, vice Dr. E. Oliver Belt, deceased. Dr. Loring was selected on account of previous valuable work in the examination of the eyesight of railroad employés.——Dr. J. Mortimer Lynch, Washington, has been appointed assistant surgeon at the National Soldiers' Home, Hampton, W. Va.

GEORGIA.

Nostrum Distribution Barred.—The Atlanta Board of Health has adopted a resolution forbidding the free distribution of medical samples in the city.

Personal.—Dr. Marcus F. Carson, Griffin, has been elected physician of Spalding County.——Dr. John W. Gillespie, Albany, slipped and fell from the loft of his barn, spraining his thigh and ankle.

Alumni to Meet.—Preparations are being made by the medical faculty to entertain the Alumni Association of the Medical Department of the University of Georgia, Augusta, which is to meet in that city May 1.

Medical Society Meetings.—The Clarke County Medical Society held its annual meeting at Athens and elected the following officers: President, Dr. Isham H. Goss, vice president, Dr.

Henry M Fullilove, secretary treasurer, Dr B O Quilhan, and censors, Drs William B Conway and Samuel C Benedict, all of Athens The question of life insurance fees was discussed and it was decided by the society that a minimum fee of $5 should be charged A committee consisting of Drs Isham H Goss, Samuel C Benedict and William B Conway, was appointed to draft resolutions setting forth the action of the society ——The Laurens County Medical Society met at Dublin and elected the following officers President, Dr Robert H Stanley, vice president, Dr Ezra New, and secretary treasurer, Dr Joseph M. Page, all of Dublin ——The Houston County Medical Society was recently organized at Perry and the following officers were elected President, Dr Oscar G Singleton, Fort Valley, and secretary treasurer, Dr Robert L. Cater, Perry ——At a meeting of the Thomas County Medical Society, held in Thomasville, March 7, the following officers were elected President, Dr Henry A Vann, Boston, vice president, Dr James N Isler, Meigs, secretary treasurer, Dr Joseph B Palmer, Thomasville, and Drs Augustus P Taylor and Joseph B Palmer, Thomasville, delegates to the state association

ILLINOIS

Smallpox—Dr Charles E Crawford, Rockford, made an inspection of the smallpox epidemic at East Aurora He found six cases, all of a mild type

Hospital Open for Inspection—The new Oak Park Hospital, which is nearing completion, after five years endeavor on the part of Dr John W Tope, was opened to visitors March 16 The hospital is in charge of the Sisters of Misericordia, Montreal, Quebec, and is to be formally dedicated April 3

Inspection of Medical Colleges—At a meeting of the State Board of Health, March 15, arrangements were made for the annual inspection of the medical colleges of Chicago and Cook County These examinations are held by the board to ascertain whether or not all the provisions under which they are operating under the state law are being observed

Personal.—Dr James N Kearney, Lamont, has been appointed a member of the staff of the Illinois Northern Hospital for the Insane, Hospital, vice Dr Claude F Shronts, resigned ——Dr Charles E Ericson has been appointed assistant surgeon at the Soldiers' Home, Quincy, vice Dr George E Rosenthal deceased ——Dr Ralph T Hinton, Quincy, has been elected secretary of the Adams County Medical Society, to fill the unexpired term of the late Dr George E Rosenthal

Senate Approves Nostrum Vendors—Senate bill 341, introduced by Senator McKenzie of Joe Daviess County, which repeals the itinerant vendor section of the medical practice act, and permits the unrestricted practice of all "proprietary" medicine men who pay a tax of $5 a year, passed the senate March 19, and is under consideration in the house of representatives, with house bill 474, introduced by Speaker Krape of Stephenson County, which is of the same purport

Chicago

Smallpox.—During the week ended March 18, eight cases of smallpox were found and the patients sent to the Isolation Hospital An unvaccinated Pullman car porter on the Rock Island System is said to have been responsible for at least three of these cases

Emergency Hospital in the Loop—The Iroquois Memorial Emergency Hospital Association has offered to erect an emergency hospital at a cost of not less than $25,000, in or near the loop, if a site be provided and if the maintenance of the institution be undertaken

Deaths of the Week.—During the week ended March 16, there were 684 deaths reported, 34 more than for the previous week and 103 more than for the corresponding week of 1906 The mortality is equal to an annual death rate of 16 92 per 1,000 Pneumonia led death causes with 158, followed by consumption with 77, heart disease, with 52, violence, including suicide with 47, nephritis, with 40, and cancer with 34 Scarlet fever caused 18 deaths, diphtheria and influenza each 9, whooping cough 7, measles 3, and typhoid fever 2

Hospital Notes.—In the contest for the most popular hospital, which the Children's Hospital Society has been conducting for the last month, the Presbyterian Hospital was declared to be the victor, receiving an elaborate set of linen By this contest $2,500 was added to the funds of the society The benefit performance of "Peter Pan" at the Illinois Theater March 10 also realized $4,500 for the Children's Hospital Society —— An appropriation of $10,000 has been voted by the Chicago Board of Underwriters to endow a room in the Presbyterian Hospital in memory of the late Edward M Teall formerly president of the board ——Subscriptions are being solicited for the work of the Chicago Tuberculosis Institute, which wishes to raise $25 000 for a tuberculosis dispensary, a day camp, and a tuberculosis hospital, for the investigation of hygienic conditions of factories, stores and schools and for a lecture course

INDIANA.

License Revoked.—The State Board of Medical Examination and Registration is reported to have revoked the license of Dr John W Arnold, Columbus, on the charge that he had performed a criminal operation

Unlicensed Practitioner Fined.—William DeHoff, a "cancer doctor" who has been operating in Hartford City for some time and who was charged with practicing medicine and surgery without a license is said to have pleaded guilty and to have been fined $20 and costs, amounting in all to $35 40

Malpractice Suit Dismissed.—In the case of Mrs Etta Hopkinson against Dr Samuel C Wilson, Anderson in which $5,000 damages was demanded on account of alleged improper treatment of a fractured wrist the case was dismissed on account of the variance between the evidence adduced, and the allegations contained in the complaint

Hold Annual Meetings—The second annual meeting of the Twelfth Councilor District Medical Society was held at Fort Wayne, February 12, and the following officers were elected President, Dr Samuel H. Havice, Fort Wayne, vice presidents Drs Dwight W Dryer, La Grange, and James S Boyers, Decatur, secretary, Dr Edmund M Van Buskirk, Fort Wayne, and treasurer Dr David C Wybourn, Sheldon —— The Sullivan County Medical Society held its annual meeting in December and elected officers for the coming year The membership of this society now amounts to 33 An auxiliary society has been organized for the purpose of holding monthly meetings

IOWA.

Society Elections—Muscatine County Medical Society elected the following officers at a recent meeting President Dr Frederick H Little, Muscatine, vice-president, Dr Channing B Kimball West Liberty secretary treasurer, Dr Thomas J Beveridge, Muscatine and delegate to the state society Dr Elbridge H King, Muscatine ——At the annual meeting of the Southwestern Iowa Medical Society held in Creston February 21, the following officers were elected President Dr Frank Jin W Sells, Osceola, vice president, Dr John A Rawls, Creston secretary, Dr John W Reynolds, Creston and treasurer Dr Joseph P Claybaugh Creston It was decided to hold the midsummer meeting of the society at Red Oak in August

KANSAS

Increase Secretary's Salary—The House of Representatives has voted to increase the salary of the secretary of the State Board of Health from $1,800 to $2,500 a year

License Medicine Vendors—The Senate in committee of the whole, has recommended for passage the house bill which fixes a license fee of $50 for each itinerant medicine peddler in each county in the state in which he operates

Election.—Lyon County Medical Society, at its annual election and banquet held in Emporia March 5 elected the following officers President, Dr David L Morgan vice president Dr Howell E Davis, and secretary treasurer, Dr Clarence A Neighbors, all of Emporia

Measles Epidemic.—In Topeka 60 cases of measles were under quarantine March 13 ——Armourdale is said to have 75 cases of measles ——Measles is reported to be epidemic at Leavenworth, where more than 100 cases have been reported

New Editor for State Journal—At the February meeting of the Council of the Kansas Medical Society Dr George H Hoxie, editor of the *Journal* presented his resignation to take effect May 1 Dr Charles S Huffman Columbus secretary of the Kansas State Society, was elected editor

Personal—Dr Ralph A Light, Chanute has been appointed a member of the State Board of Medical Examination and Registration ——Dr Clement F Grigsby Lansing who has been physician at the state penitentiary for eight years, is reported to have been dismissed by Warden Haskell because of disagreement over the conduct of the prison ——Dr Joseph B Carver Fort Scott sustained severe sprains of the hip and the left wrist in a runaway accident recently ——Dr Carlos M H McCown Chanute who was seriously injured by a fall about four months ago, is now reported convalescent.

KENTUCKY

Next State Board Examination.—The next examination by the Kentucky State Board of Medical Examiners will

April 23 and not April 2 3, as was erroneously announced in THE JOURNAL last week.

Faculty of Combined Medical Colleges.—The names of those who will probably compose the faculty of the combined Hospital College of Medicine and Louisville Medical College, will be selected, so far as the Hospital College of Medicine is concerned, from the following list of names: Drs. Philip R. Taylor and Samuel G. Dabney, diseases of the eye, ear and throat; Drs. Frank C. Wilson and Walter F. Boggess, medicine; Dr. Samuel G. Dabney, physiology; Dr. Philip F. Barbour, pediatrics and chemistry; Dr. Edward Speidel, obstetrics and gynecology; Drs. H. Horace Grant and George A. Hendon, surgery, and Dr. John E. Hays, anatomy.

MAINE

New Member of State Board.—Franklin C. Robinson, Brunswick, has been appointed by the governor a member of the State Board of Health.

Tuberculosis Exhibit.—The tuberculosis exhibition at Portland began February 28 and continued until March 5. The object was to teach the people the nature of tuberculosis and the proper methods of combating it.

Epidemic Diseases.—Rockland is suffering from an epidemic of diphtheria which threatens to assume serious proportions. The cases are reported to be widely scattered throughout the city.——A number of cases of epidemic cerebrospinal meningitis have been reported to the State Board of Health from Rumford Falls and two deaths have occurred.

Tribute to Dr. Garcelon.—At a meeting of the Androscoggin Medical Association resolutions were passed regarding the death of the venerable Dr. Alonzo Garcelon, Lewiston, cherishing his memory, bearing witness to his untiring industry, self reliance, well matured, positive and outspoken convictions and other attributes of personal leadership, acknowledging the indebtedness of the cities of the county to him for influence both before and after their incorporation, taking pride in the thought that Dr. Garcelon shed luster on the then neglected branch of major surgery for many years.

Proposed Laws.—The Maine Veterinary Medical Association is attempting to have some legal provision made for the inspection of meats consumed in the state. Under the new pure food law, all meat shipped out of the state must be inspected, but no inspection is required for meat for home consumption.——The president of the Massachusetts Society of Optometry appeared before a committee of the Maine legislature March 7, to support a bill to regulate the practice of optometry in the state. The bill was strongly opposed by many physicians headed by Dr. Frederick H. Gerrish of the Maine Medical School and Dr. William L. Cousins, Portland.

Society Meeting.—At a meeting, held in Houlton, January 16, the northern and southern Aroostook medical societies amalgamated, forming the Aroostook County Medical Society. The following officers were elected: President, Dr. Alfred D. Sawyer, Fort Fairfield, vice-president, Dr. Harry L. Putnam, Houlton, secretary, Dr. Frank H. Jackson, Houlton, treasurer, Dr. Wiley E. Sincock, Caribou, and censors, Drs. Harry L. Putnam, Houlton, Frank Kilburn, Presque Isle, Herbert F. Kalloch, Fort Fairfield, William W. White, Bridgewater, and Charles E. Thomas, Caribou.——At a meeting of the Androscoggin Medical Association, held in Lewiston, the following officers were elected: President, Dr. Charles E. Norton, Lewiston, vice presidents, Drs. Herbert H. Purinton, Lewiston, and Edson S. Cummings, Lewiston, secretary, Dr. Daniel A. Barrell, Auburn, and treasurer, Dr. Benjamin M. Sturgis, Auburn.

Medical Staff Appointed.—The directors of the Webber Hospital Association, Biddeford, have selected the following officers for the institution: Senior surgeons—Drs. M. Hubbard Ferguson, Biddeford, Jasper D. Cochrane, Saco, John S. Fogg, Biddeford, and James O. Chenevert, Biddeford; junior surgeons—Drs. Clarence F. Kendall, Biddeford, Clarence E. Thompson, Saco, Joseph M. O'Connor, Biddeford, and P. S. Hill, Saco; senior physicians—Drs. Caleb J. Emery, Biddeford, Walter T. Goodale, Saco, Jovite A. Lapointe, Biddeford, and J. D. Haley, Saco; junior physicians—Drs. Fitz E. Small, Biddeford, L. E. Willard, Saco, Thomas F. Moran, Biddeford, and Willis Hurd, Biddeford; ophthalmologist and otologist, Dr. Frederick L. Davis, Biddeford; obstetrician, Dr. Eugene D. O'Neil, Biddeford; gynecologist and pediatrist, Drs. Albert C. Maynard, Biddeford, and Laura M. Black, Saco; pathologist, Dr. L. L. Powell, Saco; consulting staff—Drs. Stephen H. Weeks, Seth C. Gordon, Alfred King, William L. Cousins, John F. Thompson, Henry H. Brock, Herbert F. Twitchell, William H. Bradford, Augustus S. Thayer, Addison S. Thayer and Samuel J. Bassford, Portland, and Dr. Charles W. Pillsbury, Saco.

MARYLAND

Personal.—Dr. B. F. Price, Mt. Carmel, health officer of the district, celebrated his fiftieth wedding anniversary March 10.——Dr. Armfield F. Van Bibber, Belair, has been appointed almshouse physician by the Hartford County Commissioners.

Destructive Fire.—The residence of Dr. Joseph T. Rothrock, former commissioner of forestry, at Mountainside Sanitarium, on the top of South Mountain, was destroyed by fire March 10, with a loss of $10,000.——The residence of Dr. Addison M. Rothrock, who is in charge of the White Pine Sanitarium, the Pennsylvania Institution for Tuberculosis, was saved by the strenuous work of a bucket brigade of consumptive patients and students of the state forestry academy.

Baltimore

Müller in Baltimore.—Prof. Friedrich Müller, Munich, addressed the Johns Hopkins Hospital Medical Society March 21 on "Newer Studies in Percussion."

Personal.—Dr. H. Barton Jacobs expects to sail for Europe May 8.——Dr. William S. Halsted has been visiting in Rochester, Minn., where he was the guest of Dr. William J. Mayo.——Dr. Thomas H. Buckler will spend several months in Europe.——Dr. Tilghman B. Marden is a candidate for election to the city council.

Railroad Surgeons Meet.—At the annual meeting of the medical officers of the Baltimore & Ohio Railroad Relief Department, held in Baltimore, March 9, the following officers were elected: Superintendent, S. R. Barr, assistant superintendent, H. A. Bateman, chief medical examiner, Dr. Summerfield B. Bond, and chief surgeon, Dr. Isaac R. Trimble.

College Union Advised.—When Dr. William Osler left Baltimore he gave as his parting advice an admonition that the University of Maryland School of Medicine, the Baltimore Medical College and the College of Physicians and Surgeons unite. An attempt was recently made by the two former institutions to follow this advice and committees were appointed. The matter was discussed very thoroughly and the advantages of union pointed out. A certain sentiment in its favor was manifested, but the conflicting interests preponderated, and for the present, at least, the matter has been dropped.

MASSACHUSETTS

New Hospital.—The new Vincent Memorial Hospital, now being built on South Huntington Avenue, Roxbury, will be a three story terra cotta and granite building, to cost about $65,000. It will be "L" shaped, designed for future enlargement, and will have 24 beds, in wards of eight and four beds, and private rooms. Special attention will be given to sun, air and the fine points of modern hospital construction. This is the hospital in which so many of Boston's wealthiest young ladies are so actively interested and is located on Chambers Street in the west end of the city.

Sanatorium Report.—The report of the trustees of the State Sanatorium for Tuberculosis at Rutland shows several changes made during the last year among the medical men connected with the institution. Dr. James F. A. Adams, Pittsfield, has become chairman of the board, Dr. Edward O. Otis, Boston, has succeeded Dr. Vincent Y. Bowditch, Boston, as visiting physician, the superintendent, Dr. Walter J. Marcley, has resigned, the office of pathologist has been abolished and three junior assistants have been appointed, Drs. Elmer H. Copeland and Justus G. Hanson, Northampton, Dr. Charles F. Canedy, Greenfield, and Dr. R. Allen Woodruff, Pittsfield, have been appointed examining physicians in addition to those already serving in the eastern part of the state. The expense during the year was $161,741, an average cost per capita, weekly, of $0.38, or 55 cents more than last year, an increase due to enlarged diet. The average number of patients was 338, average age 27. 2,102 applications for admission were received from patients of whom only 897 could be accepted. Of those admitted 36 per cent. were incipient cases, 41 per cent. were moderately advanced, and 21 per cent. advanced. Because of the lessening percentage of incipient cases the percentage of recoveries is less. Such patients are always admitted at once, for the institution was designed for them. In more advanced cases the patients often must await their turn.

MICHIGAN

Tuberculosis Sanatorium Opened.—The board of control of the Michigan State Sanatorium for Tuberculosis, Howell, at a meeting held in Lansing announced that the sanatorium would be open about April 1, with an accommodation for about 100 patients.

Infectious Diseases.—The schools of Skanee, Mich., have been

closed owing to the prevalence of scarlet fever and diphtheria in the neighborhood ——A house in River Rouge, in which five cases of smallpox were discovered, has been put under quarantine, and ten boarders who had been going and coming at will, have been vaccinated ——Two new cases of smallpox have been discovered in Kalamazoo

Personal—Dr Nelson R. Gilbert, Bay City, has been reappointed for the sixth time a member of the board of control of the Home of Epileptics and Feeble-Minded, Lapeer For the last five years Dr Gilbert has been president of the board —— Dr Herbert A. Eades, Bay City, received severe abdominal injuries in a street car accident recently ——Dr Joseph H. Ball, Bay City, is taking Pasteur treatment for hydrophobia at Ann Arbor ——Dr Ernest W Haas has been appointed a member of the Detroit Board of Health, vice Dr Charles G Jennings, term expired ——Dr Ignatz Mayer, Detroit, has returned after three months abroad

MISSISSIPPI

Hospital Open—The Kings' Daughters Hospital, Gulfport, was opened March 1, with fitting ceremonies

Houses Must be Screened—Dr George Y Hicks, city physician of Vicksburg, has announced that all houses subject to the ordinance must be screened by March 15

Graduation Exercises—Mississippi Medical College, Meridian, graduated a class of 22, March 9 Dr W A Williamson, Battlefield was valedictorian, and Dr W B Williams of South Mississippi, salutatorian

State Society Meeting—The United States Public Health and Marine Hospital Service has given permission for the delegates to the Mississippi State Medical Association, which meets at Gulfport, April 10 14, to visit and thoroughly inspect the government quarantine station at Ship Island.

Improvements at State Hospital.—Plans are being made for the additions and improvements to the State Hospital for the Insane, Jackson, including a new hospital building The trustees have decided to undertake the construction of the building themselves, employing competent superintendents and utilizing the labor of such male patients as are fit for the performance of the work required

Personal.—Dr John W D Dicks, Natchez, has been elected house surgeon of the Natchez Charity Hospital, vice Dr E Floyd Brown, resigned ——Dr George W Luster, Learned, has been elected physician at the Oakley convict farm, Dr S Pivey at the Sunflower convict farm Dr P Fairley at the Rankin convict farm, and Dr Henry Christmas, Tchula, at the Belmont convict farm (re-elected) —Dr George W Land Louin, had a narrow escape from death by the accidental drinking of carbolic acid recently

Elections—At the annual meeting of the Harrison County Medical Society, Dr Walter H Rowan Wiggins, was elected president, Dr Robert A Anderson, Gulfport, vice-president Dr Heard H. West, Gulfport, secretary treasurer, Dr Edward C Parker, Gulfport, delegate to the State Medical Association, and Dr Charles A Sheeley, Gulfport, alternate ——The Newton County Medical Association, at its annual meeting changed its name to the Newton Neshoba Medical Association and elected the following officers President, Dr J B Bailey, Conehatta, vice president for Newton County Dr Samuel B Henton Decatur, vice president, for Neshoba County, Dr Daniel J Rush, Philadelphia, secretary treasurer Dr W Jesse Chapman, Newton, censors, Drs George H McNeill, Newton, and Sidney A Majure, Dixon Philadelphia, Miss, was selected as the next meeting place ——At the annual meeting of the Perry Greene County Medical Society the following officers were elected President Dr Isham H C Cook Hattiesburg vice president, Dr W R Thames, Hattiesburg, secretary treasurer Dr S Lewis Knight, Hattiesburg censor, Dr George M Lackey McLean delegate to the state medical association, Dr Theophilus E Ross, Hattiesburg and Dr T J Stevens alternate ——The Jackson County Medical Society, at its annual meeting elected the following officers President Dr William A Cox, Pascagoula vice president, Dr Fritz F Rehfeld Moss Point and delegate to the state medical association, Dr Henry B Powell, Ocean Springs

MISSOURI

New Home for Maternity Hospital—The new home of the St. Anthony's Maternity Hospital and Home for Infants at Twenty third Street and College Avenue Kansas City will be ready for occupancy April 1 The building will contain about 60 rooms

In the Hands of the Law—In the case of Dr Edwin T Hogan, St Louis who was convicted nearly a year ago of having performed a criminal operation and ordered to pay a fine of $250 and serve six months in the workhouse and who was released on bonds, the St Louis Court of Criminal Correction which is the court of last resort confirmed the sentence on March 5 ——"Dr" Charles S DeMyer also known as Charles H. Myers, St. Louis charged with practicing medicine and surgery without a license is reported to have been fined $100 and costs in the Court of Criminal Correction, February 21 A motion for a new trial was filed and he was released on appeal bond

NEW HAMPSHIRE

Diphtheria.—Diphtheria is reported to be prevalent at Warren It has been decided to examine all students and school children daily Entertainments have been postponed and evening church service has been omitted

Pure-Food Bill.—The public health committee has reported a bill to the legislature which is in accord with the national food and drugs act but which goes even farther in its provisions in the direction of safeguarding the public health

Society Meeting—At the second annual meeting of the Hillsborough County Medical Society held at Nashua February 7 the following officers were elected President, Dr George D Towne, Manchester vice president Dr Alonzo S Wallace, Nashua secretary treasurer Dr Ella B Atherton Nashua delegates to the state society Drs Frank F Kittredge Nashua, George C Wilkins Manchester and Charles A Weaver, New Boston and executive committee Drs Arthur F Wheat, Manchester Charles A Weaver New Boston Herbert S Hutchinson Milford, Byron D Pease, Greenville, and Isaiah G Anthoine, Nashua

Personal.—Dr George L Bastian recently elected city physician of Manchester was thrown from his sleigh and had several ribs broken He was afterward taken ill with diphtheria and removed to the Isolation Hospital ——Dr George M Kimball Concord, has been appointed surgeon general of the state ——Dr John H Gleason has resigned from the medical staff of the Elliot Hospital Manchester ——Dr Frederick L Hills Concord has been elected superintendent of the Massachusetts State Sanatorium for Tuberculosis Rutland ——Dr George A Fiske Northwood Ridge has been awarded a verdict of $600 by the Superior Court in a personal injury suit against the Boston & Maine Railroad for $3 000

NEW JERSEY

Personal.—Dr Leslie I Hand Millville expects to give up the practice of medicine and enter the Methodist ministry this month ——Dr Nathaniel S Hires Salem, has gone to Italy

"Voodoo Doctor" Convicted—In the Camden Criminal Court March 8 Lafayette Powell a "Voodoo Doctor" was convicted of obtaining money under false pretenses and sentenced to 18 months imprisonment

Society Meetings—At the annual meeting of the Medical Library Association held in Newark the following officers were elected President Dr Henry L Coit Newark vice president, Dr Richard C Newton, Montclair, secretary treasurer, Dr Frank W Pinneo Newark and directors Drs William S Disbrow Samuel T Robertson Charles J Kipp and Chauncey B Griffiths all of Newark ——At the annual meeting of the Camden City Medical Society Dr Ahab H Lippincott was elected president Dr Edward A J Schellenger, vice president Dr Joseph W Martindale, recording secretary Dr William H Pratt treasurer and Dr William J Kelchner, historian ——The Orange Mountain Medical Society held its annual meeting in the rooms of the William Pierson Medical Library Association Orange and elected the following officers President Dr David Van Cleson Bloomfield vice president Dr Harrie E Matthews, Orange secretary, Dr Richard D Freeman, South Orange treasurer Dr James M Mabie, West Orange reporter Dr William Dodge Orange and censors Drs David F English Millburn Thomas W Harvey Orange and John H Bradshaw Orange ——The following officers were elected at a meeting of the Burlington County Medical Society President Dr Joseph Stokes Moorestown vice president Dr J Edward Blair Burlington secretary Dr George T Tracy Beverly treasurer Enoch Hollinshead Pemberton reporter Dr William P Melcher Mount Holly and member of the legislative committee, Dr Richard H Parson Mount Holly

NEW YORK

Lecture on Opsonins—Dr Thomas D Archibald Toronto delivered an address before the junior and senior classes of the University of Buffalo Medical Department February 28 on opsonins On the next day he gave a demonstration of the technic of opsonic work at the same place

Typhoid at Katonah—There are five cases of typhoid fever at Katonah, which is located on the Croton watershed The Water Department and the Health Department of New York City have made a rigorous inspection of the entire locality and are taking every precaution to prevent the contamination of the water supply of New York City

Hearing on Milk Bill.—The Reece bill compelling New York City to establish plants for the pasteurizing of milk was attacked before the Assembly Cities Committee on March 12 by Commissioner Darlington and Dr C D Morris, an expert on milk Dr Darlington opposed the bill because it is mandatory in its provisions, and Dr Morris declared that pasteurization destroys the wholesomeness of milk He said it would cost $7,000,000 a year to operate the plants for New York City, and that this would more than pay for all the cows affected with tuberculosis in the state. Both Drs Darlington and Morris admitted that pasteurization would be a good thing sometimes

Society Meeting—The Blackwell Medical Society, Rochester, Physicians' League, Buffalo, Women's Medical Association, New York, and the Dr Cordelia A Greene Society, Castile, joined in a banquet in honor of Dr Sarah Adamson Dolley at Rochester, March 11 At the election of the Women's Medical Association of New York, which took place at this time, the following officers were elected Honorary president, Dr Elizabeth Blackwell, Hastings, England, president, Dr Sarah R Adamson Dolley, Rochester, vice-presidents, Drs Electa B Whipple, Buffalo, Mary Theresa Greene, Castile, and Mary H Cotton, New York City, secretary, Dr Eveline P Ballentine, Rochester, and treasurer, Dr M May Allen, Rochester

New Bills in Legislature.—Mr Wainwright has introduced an act to amend the penal code in relation to the sale of certain drugs without prescription, and the prescribing of certain drugs for habitual users of drugs This act provides that no person shall sell opium, its alkaloids or derivatives, chloral, its derivatives, cocain or its salts, eucain or its salts, acetanilid or any preparation containing the before-mentioned drugs except on the written order or prescription of an authorized physician, dentist or veterinarian——A bill introduced by Mr Reese would forbid the importation, manufacture for sale, sale offer for sale or having in possession with intent to sell within the state, of adulterated, misbranded, poisonous or deleterious foods, drugs, medicines, liquors, beverages and confections, regulates the enforcement and provides a penalty for the violation thereof

New York City

Personal.—Dr Harry M Archer has been appointed honorary medical officer of the fire department, with the rank of battalion chief——Dr William B Cook is reported to be in a serious condition as the result of being beaten by a highwayman, March 8

Defective Eyesight—The school census just completed shows that of the 688,427 children attending school in Greater New York, more than 18 per cent. are foreign born, and that out of 58 948 whose eyes were tested, 17,928 were found to be suffering from visual defects

Lectures on Health Topics—The Eastern Branch of the Y M C A. of Brooklyn is giving a course of lectures on subjects pertaining to health The first was on "Who Brings Up Your Child?" by Dr William H Allen The next will be by Dr Ira S Wile on "Vaccination" Another will be by Dr John S Huber on "Prevention of Consumption," and the last will be by Dr Jerome Walker on "Foods"

Law and Medicine Dine—The Society of Medical Jurisprudence commemorated its twenty fifth anniversary by a dinner at the Hotel Savoy The first speaker was Dr Joseph D Bryant, who reviewed the organization of the association and took occasion to criticise those who are giving endowments favoring the clerical profession to the detriment of the medical fraternity Dr Harvey W Wiley of the United States Department of Agriculture spoke on "The Law and the Fact' and Rev James E. Freeman gave "A Pulpit View of Physicians and Lawyers"

Lodging Houses Must Be Improved—The sanitary code governing lodging houses has been revised by the health department with a view to securing better ventilation improved sanitation greater cleanliness and other improvements The new rules call for an increase of one half the cubic air space at present provided per lodger and insist on adequate ventilation at night They also require that from 10 o'clock in the morning until 2 in the afternoon the windows of sleeping rooms and dormitories shall be open sufficiently to admit plenty of fresh air A larger supply of hot and cold water, available at all hours for baths, is also to be provided Clean sheets and pillow cases must be provided daily for all beds It is estimated that between six and seven million night's lodgings are sold in Manhattan and Brooklyn annually One half the male applicants for aid and the larger number of homeless patients in the city hospitals come directly from the lodging houses and it is claimed that a long stay in these places has a debilitating effect physically

Hospital News—The Anna Ottendorfer Dispensary was dedicated by Governor Hughes, March 16 This dispensary is connected with the German Hospital, and has been erected by the children of Mrs Anna Ottendorfer as a memorial——The annual report of the Manhattan Eye, Ear and Throat Hospital for the year ended Sept 30, 1906, shows that during that year 18,246 cases of eye disease were treated and 3,718 operations on the eye performed, 6,283 cases of ear disease were treated and 1,899 operations performed, 6,465 cases of disease of the nose, throat and allied organs were treated and 1,365 operations performed——The fortieth annual report of St John's Guild for the year ended Sept 30, 1906, shows that during the existence of the guild, 1,253,597 mothers and children have been cared for for periods ranging from one day to two months During 1906, 38,302 persons were carried on the Floating Hospital The cost of maintaining the Floating and Seaside Hospital was $77,235 There was a balance left over at the end of the season of $8,835 available for the summer of 1907 The city contributed $20,000 to the work——The Board of Estimate has adopted tentatively, as a site for the proposed seaside sanatorium a tract of land at Rockaway Point which will cost about $1,000,000, and comprises about 350 acres

NORTH CAROLINA

Sanatorium Incorporated—The Asheville Biltmore Sanatorium Company has been chartered, with Dr Paul Paquin, Asheville, as chief incorporator, with a capital stock of $50,000

New Infirmary—The trustees of the state university, Chapel Hill, have let the contract for the erection of a new infirmary for the care of sick students at the university The building is to cost $20,000 and will be ready for occupancy December 1

Class Withdraws from College—Twenty seven students, constituting the entire sophomore class of Shaw University (colored), Raleigh, have withdrawn from the university, their action being based on their resentment of the suspension of a fellow student

Medical Officers Commissioned—The following medical officers of the State Guard have recently been commissioned Capt Andrew H. Harriss, Wilmington, assistant surgeon, Lieut Albert De K. Parrott Kinston, assistant surgeon, Lieut J Lewis Hanes, Winston Salem, assistant surgeon, and Lieutenant Commander R. Duval Jones, New Bern, surgeon to the naval brigade

Milk Tested.—The city of Raleigh is having regular tests made each week by the city bacteriologist, Dr F L Stevens, of samples of milk from each of the eight dairies which supply the city The most recent tests show that five of the eight were fully up to the standard set by the commission, that two showed an excess of bacteria above the standard of the board, and that one showed a deficiency of fat

State Hospital for Tuberculosis.—A bill is pending in the legislature which provides for the establishment of a state hospital for the treatment of tuberculosis to be under the control of nine directors, elected by the legislature and appropriating $15 000 for the establishment, with an annual allowance of $5,000 for running expenses Drs M Eugene Street Glendon, and James E Brooks, Greensboro, are the medical men named as directors

Personal—Among the medical members of the county boards of education throughout the state are the following Bertie, Dr Henry V Dunstan Windsor Carteret Dr C N Mason Harlowe Granville Drs Benjamin K Hayes Oxford, and Elijah B Meadows Oxford Haywood Dr J E Wilson Canton Lenoir Dr Richard H Lewis Raleigh, Scotland, Dr Walter L Pate Gibson Stanly Dr Daniel P Whitley Millingport Stokes Dr Elias Fulp Walnut Cove Swain Dr James H Teague Whittier, Union Dr John E Asheraft, Monroe Vance Dr Robert J Gill Henderson and Yadkin Dr M Luther Matthews Fast Bend——Dr Charles J Sawyer, Salisbury, has removed to his former home at Windsor——Dr C A Woodward Wilson has removed to Durham——Dr Frank Roberts Marshall has been appointed postmaster at that place——Governor Glenn has appointed Dr James W

McNeill, Hope Mills, who was a member of the last legislature, the medical member of the new State Hospital Commission ——The nomination of Drs L Julian Picot, Littleton and William H. Whitehead, Rockymount, for directors of the State Hospital for the Insane, have been confirmed by the Senate

NORTH DAKOTA.

Epidemic Diseases—The schools of Bowbells have been closed on account of the prevalence of smallpox.——Hemorrhagic measles is reported to be epidemic in Ellendale ——More than 100 cases of measles are reported from Fargo ——Scarlet fever is reported to be prevalent in Grand Forks Several cases have occurred at Grand Forks College and quarantine has been established over the institution

Personal—Dr Patrick M Walker, St. Thomas, has removed to Everett, Wash ——Dr Thor O Moeller, Devil's Lake, has located in Minot ——Dr Thomas G Devitt, Grand Forks, has returned from the Pacific Coast, where he spent several weeks ——Dr Hamilton P Boardmann and family, Oakes, have removed to Southern California ——Drs Gudmund J Gislason and Thomas Mulligan, both of Grand Forks, are spending a year in Europe.

Society Meetings.—At the annual meeting of the Traill County Medical Society, held in Mayville, Dr George W McIntyre, Mayville, was elected president, Dr Edward C Haugensen, Hillsboro, vice president, Dr Arnt G Anderson, Hillsboro, secretary, and Dr Henrik S Schanche, Portland, treasurer ——At the annual meeting of the Cass County Medical Association, held in Fargo, Dr Henry A Beaudoux was elected president and Dr Ralph E Weible, vice president, both of Fargo ——At the annual meeting of the Devil's Lake Medical Association the following officers were elected President, Dr William F Sihler, Devil's Lake, vice president, Dr George F Drew, Crary, secretary treasurer, Dr Gustav J McIntosh, Webster, delegate to the state society, Dr Arthur T Horsman, censors, Drs Thor O Moeller, Devil's Lake, William C Fawcett, Starkweather, and Joseph W Warren, Leeds and committee on public health, Drs Arthur T Horsman, Devil's Lake, Gustav J McIntosh, Webster, and Roy V Rogers, Penn

OKLAHOMA

Epidemic Diseases—An epidemic of measles is reported from Duncan ——Four cases of cerebrospinal meningitis, with two deaths, have been reported from Oklahoma City ——Several cases of smallpox are reported from Grand County

Medical Colleges Incorporated—The Oklahoma State Medical College has been incorporated at Oklahoma City by Dr William J Darnell, Mountain View, Dr Willis F Westmoreland, Atlanta, Ga , Dr Henricus H Battey, Rome, Ga., and J P Eckers and Dr Joseph R Phelan of Oklahoma City —— The Epworth College of Medicine has been chartered at Oklahoma City with a capital stock of $20 000 by Drs L Haynes Buxton, Ulbus L. Russell, Edmund S Ferguson and others

Society Meetings—At the annual meeting of the Kiowa County Medical Association, held at Harrison, the following officers were elected President, Dr Herbert E Colby, Gotebo vice presidents, Drs Alexander Barkley, Hobart, and Marshall E Chambers, Gotebo, secretary, Dr James M Bonham, Hobart, and treasurer, Dr William L York, Hobart.——The Comanche County Medical Society, at its annual meeting, held in Lawton, elected the following officers President, Dr Alexander N. Campbell, Lawton, vice president, Dr M A Jones Walter secretary treasurer, Dr James L Lewis, Lawton censor Dr William M Turner, Lawton, and delegate to the state association, Dr David A Myers, Lawton ——At the annual meeting of the Central Oklahoma Medical Association held at Enid, the following officers were elected President Dr H Coulter Todd, Oklahoma City, vice president, Dr Newton Rector Hennessey, secretary treasurer, Dr George V Boyle Enid and censors, Drs Thomas A Rhodes Goltry Franklin P Huhn, Pond Creek and Edmund S Ferguson Oklahoma City ——At the annual meeting of the Pottawatomie County Medical Society, held at Shawnee Dr J Asa Walker was elected president, Dr Joseph M Trigg vice president Dr Walter C Bradford, secretary treasurer (re elected), all of Shawnee and Dr Charles H Blickenderfer Tecumseh censor

OREGON

Personal—Dr F Barton Pickel Medford has been elected president and Dr Edward V Pierce Portland vice-president of the State Board of Health ——Dr Fred V Mohn has been elected city physician of Astoria

Hospital Notes.—Articles of incorporation have been filed for the building of an institution at La Grande, to be known as the Grande Ronde Hospital, with a capital stock of $16,000 The building will cover a ground space of 80 by 32 feet and will have accomodation for about 30 patients ——A bill introduced by Senator Beach provides for a state commission on tuberculosis and for the establishment and maintenance of two state sanatoria for consumptives one in Eastern Oregon and one in Western Oregon with an appropriation of $25,000 to establish and maintain the institutions for two years

Society Meeting—At the annual meeting of the Clatsop County Medical Society the following officers were elected President, Dr Orrin B Estes, Astoria vice president Dr Arthur A Finch, Astoria treasurer Dr Robert J Pilkington Astoria, secretary, Dr John M. Holt U S P H and M H Service, and delegate to the state association, Dr Henry L Henderson, Astoria ——The Portland Academy of Medicine has been organized with the following officers President Dr Simeon E Josephi, vice-presidents Drs Andrew J Giesy and Otto S Bingswanger secretary Dr Albert E Mackey, and treasurer, Dr James F Bell

PENNSYLVANIA

Election.—At the annual meeting of the Association of the Free Hospital for Poor Consumptives White Haven Sanatorium, held March 11 the following officers were elected President, Dr Lawrence F Flick vice presidents Louis Gerstley and M S Kemmerer, secretary Charles W Welsh treasurer, Edward A Miller and managers James M Wilcox Talcott Williams, Frank Graham Thomson Dr Charles J Hatfield John K Mitchell, Dr D J McCarthy Dr Joseph Walsh and Dr William B Stanton During the first six years of the association, $30 000 was spent for the maintenance of tubercular subjects in institutions over which the association had no control. In 1901 the White Haven Sanatorium was started with a capital of $2 500 A few beds were placed in a barn and, from this humble beginning, the establishment has grown to an institution capable of treating and quartering 196 patients The entire cost of the plant so far has been $174 000 About $100 000 more is needed to complete the original plans When finished the buildings and equipment will have cost approximately $900 a bed and the institution will be one of the most economically built and equipped of its kind in the world In Europe similar establishments rarely cost less than $1 500 a bed The average cost of caring for a patient is $7 00 a week this low rate being due in part, to the practice of paying the invalid for a certain amount of work for the institution as exercise

Society Elections—Mifflin County Medical Society has elected the following officers President, Dr Henry W Sweigart Lewistown, vice presidents Drs Robert F Barnett, Lewistown and H S Rothrock, secretary, Dr James A C Clarkson Lewistown, treasurer Dr Alexander S Harshberger, Lewistown, and reporter, Dr Walter H Parcels, Lewistown ——Montgomery County Medical Society has elected the following officers President Dr Oliver C Heffner Pottstown vice presidents, Drs William G Miller and George W Stein Norristown, secretary, Dr Harry H Whitcomb Norristown corresponding secretary and reporter, Dr Edgar S Buyers Norristown and treasurer Dr Frank C Parker Norristown ——Schuylkill County Medical Society has elected the following officers President, Dr George H Moore Schuylkill Haven vice president, Dr Arthur B Fleming, Tamaqua, secretary and reporter, Dr George O O Santee treasurer, Dr Jacob Taggart, and censor Dr J Spencer Callen Shenandoah —— Lebanon County Medical Society has elected the following officers President Dr William M Culford vice presidents Drs Alfred S Weiss and Seth A Light treasurer Dr Warren F Klein secretary Dr Charles M Strickler and medical and surgical reporter Dr John J Light, all of Lebanon —— Huntingdon County Medical Society has elected the following officers President Dr Charles A R McClain Mount Union vice president Dr Alvin R. McCarthy Mount Union, secretary and reporter Dr Howard C Frontz Huntingdon treasurer Dr George C Harman Huntingdon and censors Dr Rudolph Myers Huntingdon Charles Campbell Petersburg and Charles B Bush Orbisonia ——Dauphin County Medical Society has elected the following officers President Dr Charles L. L. Keene vice presidents Drs J Warren Leap and John C DeVenney secretary Dr Clarence P Phillips treasurer Dr Frank D Kilgore reporter Dr Charles M Pickert censors Drs J Wesley Ellenberger P Hartman delegate to executive council [illegible] J [illegible] C Harrisburg and alternates Drs [illegible] and Charles S Pebuck Harris

Philadelphia.

Donation Day—The first annual donation day of the Roosevelt Hospital was observed March 20 The hospital had especial need for twenty new beds At present there are only twenty four beds in the institution The hospital opened Nov 9, 1905, and since its opening 1,000 patients have received treatment.

Keen Leaves College—Dr William W Keen finished his service at the Jefferson Medical College March 11 and left the institution with which he has been connected so long He tendered his resignation as professor of principles of surgery at the last meeting of the directors There was no formality about his going He will sail March 27 for Europe, where he will spend about two years

Presentation to Dr Coplin.—The tenth anniversary of his professorship in Jefferson Medical College was made the occasion, March 15, by the Coplin Pathological Society at its annual dinner of the presentation to Dr W M Late Coplin, director of the Department of Public Health and Charities, of a silver service as a mark of the appreciation of pathologists for his services to this branch of the profession Dr Randa C Rosenberger acted as toastmaster

Charity Ball.—A meeting of the executive committee of the twenty seventh annual charity ball, held January 30, took place March 14 The net proceeds for distribution among the beneficiaries was found to be $9,600 Each of the following institutions received $2,400 Children's Surgical Ward of the Hospital of the University of Pennsylvania, Maternity Department of the Jefferson Medical College Hospital, the Children's Aid Society, and the Polyclinic Hospital

Health Certificate Before Marriage—At its regular meeting March 14, the Philadelphia County Medical Society adopted a resolution urging the legislature to pass a bill requiring certificates to the effect that both parties to a proposed marriage are, in the opinion of a qualified physician, free from disease transmissible to progeny, before a license shall be issued to such persons to wed The society affirms the principle involved and endorses the efforts of the community to secure the adoption of the measure

Hospital Report.—The report of the Mount Sinai Hospital for February shows that 47 patients were admitted which, with the 28 patients under treatment at the beginning of the month, made a total of 75 treated Of this number, 30 were discharged cured, 5 improved, 5 unimproved, and 3 died, leaving 26 patients under treatment at the end of the month In the out patient department 2,613 visits were paid Of the total visits 916 were new patients In the emergency ward there were 292 patients treated, 46 of which were patrol cases There are at present 16 typhoid fever patients in the hospital At an executive committee meeting held March 2, Dr Alexander Marcy, Riverton, N J, was elected governor to fill the unexpired term of one year of Dr L. Webster Fox

Objections to Hospital.—A petition signed by nearly all the property owners in the vicinity of the Rush Hospital for Consumptives at Thirty third Street and Lancaster Avenue, protesting against further appropriations for the extension of the building, was forwarded March 11 to both branches of the Legislature at Harrisburg The reasons set forth in the protest are these 1 The soft coal smoke from the yards of the Pennsylvania Railroad, which constantly permeates the atmosphere surrounding the hospital, is prejudicial to lung diseases 2 The operation of the hospital and the occurrences in and about it are a nuisance to the residential neighborhood in which it is located 3 Any addition to the hospital whereby its capacity will be increased will further depreciate the value of property in the neighborhood, which has already been seriously prejudiced by it. Ineffectual protest was made at the time this hospital bought the property it occupies This building still stands in an unfinished condition and supporters of the institution have asked for more funds to complete it. A request for the appropriation of $140,000 to complete the hospital will come before the Legislature now in session

GENERAL

Yellow Fever—Yellow fever is reported at Paraje Nuevo, near Cordola, Mexico, and precautionary steps have been taken

Hospital Boards Meets—The first meeting of the medical board of the American Hospital, Mexico City Mexico, which is composed of Drs Gustavo Pagensthecher Ernesto P Fichtner, Alberto R. Goodman, P W Monroe and H Y Spence, was held March 6 Dr Pagensthecher was elected chairman of the board

Dr Osler's Mother Dies a Centenarian.—Dr William Osler's mother died in Toronto March 18 at the advanced age of 100 years and 3 months Few mothers had a family of such distinguished sons Besides Professor Osler, now regius professor of medicine, Oxford, England, there is F B Osler, a wealthy financier and a member of Parliament for Toronto, another is Justice of the Ontario Supreme Court, and the fourth was one of the most famous criminal lawyers of Canada

Inebriety Association at Atlantic City—The American Association for the Study of Alcohol and Narcotic Drugs will hold its annual meeting in the parlors of the Hotel Marlborough Blenheim at Atlantic City, N J, June 4 to 6 from 9 to 10 30 a m An interesting program is being prepared, with reports on different phases of the progress of the study of this subject at home and abroad All physicians who would like to know something of this new field of spirit and drug psychosis are invited to be present For further particulars and programs address the secretary, Dr T D Crothers, Hartford, Conn One feature of the session that is being planned is a temperance lunch, at which prominent men will speak

Health of the Philippines—Dr Heiser, chief quarantine officer reports the state of the public health is more satisfactory than at any time since the American occupation The sanitary work of a permanent character, which has steadily been carried on during the past few years, is gradually beginning to be felt During 1906 the population of the provinces of Cebu Cavite and Batangas have been systematically vaccinated with the result that, instead of a death list of over 2,000 in Cebu from smallpox and of from 600 to 700 in Cavite and an equal number in Batangas, the number has been reduced to a scattered few, none having come to the attention of the bureau of health during the past six months It is believed that the artesian wells, which are being systematically installed in a number of provinces, will be another important step in reducing the mortality of the islands Bacteriologic examinations made of 600 persons selected at random showed uncinariasis present in more than 50 per cent of those examined

CANADA.

Vital Statistics—In February there were 351 cases of infectious diseases reported in Montreal Of this number 82 were tuberculosis The death rate in Montreal for 1906 was just a fraction under 22 per 1,000 of population, an increase of 2 per 1,000 over 1905

Work for Consumptives.—The committee conducting a campaign in British Columbia in aid of a provincial sanatorium for consumptives, has recently sent out 6 000 circulars and collectors are making a house to house canvass throughout the province soliciting subscriptions The St John, N B, Medical Society has appointed a special committee to urge on the government of New Brunswick the advisability of building a provincial sanatorium for the treatment of consumptives in that province——The annual meeting of the Canadian Association for the Prevention of Tuberculosis was held in Ottawa March 13 and 14 The following officers were elected Honorary president, Earl Grey, honorary vice presidents, the Lieutenant Governors of the different provinces of Canada, president, Hon Senator Edwards, secretary, Rev W Moore, and treasurer, Mr J M Courtenay A resolution was adopted asking for a more stringent inspection of immigrants on the part of the federal officers

Personal.—Dr William Black Winnipeg, is making his annual visit to Rochester and New York——Dr Charles Morrison Montreal, has sailed from Boston for the Mediterranean ——Dr Campbell Howard, Montreal is returning from abroad ——Dr Gordon T Alley Charlottetown P E I, who has been ill at the Royal Victoria Hospital Montreal has gone to Palm Beach, Fla——Drs John Stewart and C Dickie Murray, Halifax, are in Bermuda for their health Dr Harry J Watson U S Medical Immigration officer at Winnipeg, has recovered from his recent severe illness and resumed practice ——Dr John Hardie Morden Man has gone to study at Edinburgh——Dr Francis J Ball Singhampton Ont has accepted a surgeoncy on a steamship line to Egypt——Dr William Stevenson Virden Man is doing graduate work in Chicago——Dr William R Nichols Winnipeg has been appointed examiner in physiology for the University of Manitoba——Dr David Low, Regina, Sask, has gone to the West Indies for a visit

Osteopaths in Quebec.—The whole of the afternoon of March 6 was devoted to the consideration of the new medical bill before the Quebec provincial legislature. The bill was in charge of Dr A. Albert Jobin and was proposed in the interests of the College of Physicians and Surgeons of Quebec. The bulk of the debate was on the clause relating to the advance to five instead of four years' study All the medical men, members of the legislature took part in the debate, and all with one exception supported the proposal, but all in vain for the clause was struck out and the four year course in medicine will still obtain in Quebec The osteopaths then sent a delegation to wait on the premier, protesting against certain clauses of the bill, and in this connection one of their leaders—there are five osteopaths doing business in Montreal—gave out some information which Canadians in the medical profession can scarcely credit namely, that since 1901 osteopathy had been recognized and legalized in 34 states of the United States, and that the Supreme Court of the United States had ruled in their favor in other states

Hospital News—The St John (N B) hospital commissioners are sending to each practitioner of New Brunswick a copy of the scale of fees of the hospital, as many medical men have been in the past in the habit of sending in patients without telling them that there is such a things as a scale of fees —— Dr Rowley has been appointed medical superintendent of the St John (N B) Hospital, and will assume his duties some time during the present month ——Dr Thomas Walker, St John, N B, has been inspecting various hospitals in the United States to obtain information for use in the new operating room in connection with the St John General Hospital ——It is proposed to erect a 60 bed hospital in Regina, Sask, under the care of the Grey Nuns, at a cost of $100,000 ——A new general hospital has been opened at Wingham, Ont ——A new wing containing 30 beds has been completed for the General Hospital at Walkerton, Ont ——Dr John N F Brown, medical superintendent of the Toronto General Hospital, Prof A B Macallum F R S, Toronto University, Dr R W Bruce Smith, Ontario Hospital Inspector, and Mr M J Haney, chairman of the building committee in charge of the erection of the new hospital, have been in New York, Philadelphia and Baltimore and other cities in the United States gathering information and making observations of hospitals ——Mr William Southam, Hamilton, Ont, has donated to the Hamilton City Hospital, $15,000 to build a wing for incurable consumptives —— The Alberta legislature has set apart $34,500 for hospital purposes in that province for the current year ——The Lady Minto Hospital at New Liskeard, Ont, will soon be ready for occupation It is being built at a cost of $20,000, will have thirty five beds, and will be in charge of three nurses of the Victorian Order ——The annual meeting of the Winnipeg General Hospital was held in Winnipeg last week During the past year there were treated in the institution 4,741 patients and 5 078 consultations were held in the out door departments The number of deaths was 317 The work of this hospital has grown enormously within the past five years, as in 1901 the number of patients treated was only 2,773 The total ordinary receipts amounted to $144,823 94 and the expenditures to $131,178 78

FOREIGN

Hospital to be Erected on Mount of Olives, Jerusalem.—An exchange states that a new hospital is to be erected on the Mount of Olives by evangelical residents of Jerusalem The corner stone will be laid on Easter day

Treatment of Incipient Mental Disorders in Scotland.—The managers of the Western Infirmary, Glasgow, have decided to undertake the treatment of incipient mental disorders in the dispensary attached to the infirmary The advantages of such clinics are obvious, says the *Lancet*, and students should receive considerable benefit from them

Proposed Camillo Golgi Scholarship at Pavia—A subscription has been opened in Italy to collect funds to establish a perpetual medical scholarship at the university of Pavia in honor of Golgi Professor M Mariani of Pavia has been appointed treasurer of the fund The students of the university opened the subscription with the sum of $200

Death of Bacteriologist Studying the Bubonic Plague—The fortress of Cronstadt near St Petersburg has a laboratory specially equipped for research on the bubonic plague and a number of scientists have been busily at work there for some time One of them, Dr Schreiber, became accidentally inoculated with the plague and his death has just been reported

Personal—Dr Donald MacAllister has been appointed principal of Glasgow University to succeed the late Principal Story For more than three centuries a divine has been at the head ——Dr Robert Kennedy has been appointed lecturer in applied anatomy at Glasgow University ——Agnes Cameron, M B, Ch B, has been appointed extra assistant gynecologist to the Royal Infirmary, Glasgow

Suppression of Opium Smoking in Australia—The *Australasian Medical Gazette* states that the Opium Suppression Bill has almost completely annihilated the vice in Melbourne while reports show the same desirable end has been attained in other parts of the country The various police officials who have sent in reports state that the multitude of obstacles to opium smoking raised by the measure has resulted in the practice having diminished until the evidences of its existence are scarcely apparent.

Streets Named After Physicians—The *British Medical Journal* has recently been publishing a list of streets named after physicians in various towns of England with brief biographical sketches of the physicians in question when they belonged to a preceding generation The list is proving longer than was at first anticipated One of the ways in which the Spanish propose to honor Cajal since his receipt of one of the Nobel prizes is to change the name of one of the streets of Madrid to name it after him It might be interesting to know what streets in American towns are named after physicians

Centennial Celebration of the Surgical Clinics at Vienna—The hundredth anniversary of the founding of the "Operateur Institut" at Vienna was celebrated March 15 with great ceremony Hochenegg and von Eiselsberg are the present chiefs of the first and second surgical clinics, and special demonstrations and inspection of the premises were the order of the day In the evening the annual meeting of the local medical society resolved itself into an advance celebration in honor of the eightieth birthday of Lord Lister, extolled as the 'founder of modern surgery" A Fraenkel delivered the main address of the evening and the festivities closed with a social gathering in the Riedhof restaurant Lister was born April 5, 1827

First Congress of German Urological Society—This newly organized association of German speaking urologists will hold its first annual meeting at Vienna, Oct 2 5, 1907 Küster and von Eiselsberg will lead the discussion on the diagnosis and treatment of tumors of the kidney, and Kümmel and Holzknecht the Vienna Roentgen expert on the diagnosis and treatment of stone in the kidney The third topic announced for discussion, "Albuminuria," will be presented by von Noorden and Posner An exhibition of instruments etc will be held in connection with the congress Address all communications to the general secretary, Dr Kapsammer, Maria Theresien strasse 3 Vienna IX Austria The subscription fee of 10 marks ($2 50) should be forwarded to the treasurer, Dr F Löwenhardt Karlstrasse 1 Vienna Posner of Berlin and von Frisch of Vienna will preside

Repeal of Recent French Law Creating New Certificate for Advanced Medical Education—THE JOURNAL commented editorially on page 587 of the last volume on the decree issued last July in France creating a new certificate to be awarded to physicians who could pass certain examinations On receipt of this certificate they would be eligible for any university or other medical position at any time thereafter without the necessity for further examinations The profession throughout the country did not approve of the measure, as it was liable to create invidious distinctions between physicians by establishing two grades of physicians—those who had the certificate and those who had not suggesting the superiority of the former The authorities have now repealed the law concerning the certificate, although the requirements for examinations are retained, and those physicians who pass the examinations with honor will be given the preference in appointments to medical positions without re examination The *Semaine Medical* for March 6 gives the full text of the official documents relating to these changes in the mode of appointments to medical positions They free physicians from the dread of impending re examination and allow them to pursue their researches and work with a quiet mind

The Famine in China.—Acting Assistant Surgeon Ransom of the Public Health and Marine Hospital Service reports that smallpox has broken out in the camps along the Yangtze River China in which many thousands of famine refugees from the famine area are now con[illegible] ated There are more than a million and a [illegible] ra[illegible] in the a few hours travel [illegible]

fraction of the mass affected by the famine These people are herded together without regard to sanitation They are living in temporary huts of matting, 4 feet in height by about 6 feet wide and 8 feet deep, one end of which is open and the other closed with sod Such a structure contains 8 or 10 individuals clothed in rags, filthy beyond description, and the huts are packed together in the closest possible manner The food of these sufferers consists of a small cup of rice each per day or the equivalent of about 2 cents American money with which to buy food, this relief being supplied by the Chinese officials As there is no food to buy, the financial relief offered is of little avail It is reported that the country over which these people have traveled to the concentration camps resembles that which has been swept over by a swarm of locusts There is not a living thing to be seen, either vegetable or animal, and even the bark of trees and roots and refuse of all kinds are being consumed for food The extreme suffering in the famine area continues unabated, notwithstanding the fact that there have been sent from Shanghai, through voluntary contributions of its citizens, tons of provisions for the stricken people These provisions are accumulating at the various ports along the Yangtze, for various reasons, chief among which are bad roads or no roads, the silting up of the waterways and lack of transportation into the country Severely cold weather adds to the suffering One of the results of this condition is that many beggars are finding their way into Shanghai, bringing with them the diseases which prevail in the concentration camps whence they come

Congress for Medical Economics in Belgium.—The third annual conference of Belgian physicians to discuss organization, contract practice, insurance fees, medical legislation and the like, will convene at Antwerp in July The subjects to be especially discussed this year are the needed reforms in the present system of insurance against industrial accidents, the free choice of a physician by the injured workman (known abroad as "the American plan"), and the advisability of organizing special postgraduate courses in medical hygiene and medical jurisprudence, with diplomas The two preceding congresses were very successful They are all organized by the officers of the general medical association, the *Fédération Médicale Belge*, which has its central offices in the *Maison des Médecins* at Brussels, the special building erected a year or so ago for a central gathering place for physicians and medical societies

Repression of Ankylostomiasis in Belgium.—According to reports from Belgium, much success has attended the recent researches made there in regard to ankylostomiasis, "miner's anemia," and it is stated that by putting into execution the knowledge thus gained, the disease has been virtually controlled The fact has been made perfectly clear, as already mentioned in THE JOURNAL some time ago, that the disease is caused either by the parasitic worm entering by the mouth or by penetration through the skin, and that personal cleanliness and careful attention to sanitation are the most effectual means of combating it Dr Herman, director of the Institute of Bacteriology of the province of Hainaut, has verified in a practical manner the conclusions reached by Looss in Egypt, namely, that the larval germs of the disease coming in contact with the flesh, will penetrate the skin The worms either penetrating through the skin or entering the mouth, of course reach the intestines, and after a time reduce their victims to a condition of acute anemia A feature of the disease is that the miner, although himself infected, is unable to infect other members of his family Without the necessary warm atmospheric conditions the germs of the disease can not be transmitted This point plainly demonstrates the fact that good sanitation is essential if the disease is to be stamped out The steps taken by the Belgian government appear to have been effectual in bringing about this result It is satisfactory to be well assured that by observing strictly the laws of personal cleanliness and sanitation, as has been done in Belgium, the disease can be eradicated

LONDON LETTER

(From Our Regular Correspondent)

LONDON, March 2, 1907

The Epidemic of Cerebrospinal Meningitis

The epidemic of cerebrospinal meningitis in Ireland and Scotland is increasing in an alarming manner, and several cases have occurred in London and other parts of England Up to February 27 there have been 123 cases, with 72 deaths in Belfast 8 other cases have been reported from various other towns in the north of Ireland In Dublin 11 cases and 8 deaths have occurred The disease has been made notifiable for six months In London 3 cases and 2 deaths have occurred Cases are also reported from Chelmsford, Hull, Handsworth and Eccles In Glasgow the death roll amounts to 125 and there are now 101 cases under treatment The total number of cases in the United Kingdom now amounts to 483 and the deaths to 364 In London ample provision has been made for an epidemic

In Edinburgh the medical officer of public health states that during January there were 25 cases and 21 deaths However, from postmortem bacteriologic investigations it was decided that a third of the deaths attributed to meningitis in epidemic form were due to other diseases, principally to tuberculous and acute meningitis Mistaken diagnoses undoubtedly not infrequently happen when epidemic meningitis is prevalent, but it is certain that meningitis in its different forms has been unusually common in Great Britain during the past winter

Sanitary Education in the Army

The war office has at last been stirred up to make proper provision for the teaching of hygiene in the army A course of lectures on sanitation will be given to officers at least once annually by the commanding sanitary officer or by a selected member of the Royal Army Medical Corps A manual of sanitation has been prepared and will be issued to all concerned Instructions and examinations will be based primarily on this manual After March 1, 1908, lieutenants will be required to pass an examination in sanitation before promotion to the rank of captain Officers who obtain 50 per cent. of marks will be recorded as passed. Those who gain 75 per cent will receive a special certificate in sanitation Officers of companies squadrons, etc., will give instruction to their non commissioned officers and men in sanitation Instruction will be given to fit them for the performance of sanitary police duties, the sterilization of water on active service, etc In other respects the War Office has also awakened to the necessity of sanitary preparations On mobilization being ordered a sanitary inspection committee is to be formed for service in the field Its duties will be to see that sanitary appliances and materials of all kinds are available and that an adequate reserve is maintained, to assist general officers and the medical service in maintaining the health of the army, to initiate schemes of general sanitation and to serve as a board of reference for the solution of sanitary questions to visit and inspect stations occupied by troops, to advise local authorities regarding necessary sanitary measures, and to promote in every way the maintenance of sanitary conditions

Rearing of Children.

An interesting lecture on rearing of children was delivered at the Institute of Hygiene, London, February 20, by Dr George Carpenter, a well known British authority on pediatrics He maintained that the future prosperity and position of Great Britain depend on this subject receiving the serious attention due it The best point made by Dr Carpenter was the severe indictment brought against the lethargy and negligence of the authorities in allowing the British milk supply to continue in its present unsatisfactory condition He said that great indignation was expressed when "The Jungle" revealed the horrors of American packing houses, but it seems, said the lecturer, difficult to arouse the public about an equally scandalous state of affairs in regard to our own dairy operations Untold infant lives he asserted, are sacrificed to the demon "Dirt," and the health and physique of innumerable others are seriously undermined by this and by the wholesale supply of tuberculous milk

LONDON, March 9, 1907

Malta Fever

The commission appointed to investigate Malta fever reports that the rapid disappearance of Malta fever from Gibraltar which commenced in 1885, is intimately associated with the greatly lessened importation of goats from Malta At present Spanish goats are introduced, and it is recommended that these be quarantined until examination of the blood has shown them to be free from infection

A Middle Class Hospital

A project has been started to found a middle class hospital to be called the Knollys Memorial Hospital and to supply a long felt want in London—a hospital for the benefit of persons unable to pay the high fees of nursing homes and yet willing to pay according to their means Many nursing homes are established in houses never intended for the purpose, with awkward staircases badly ventilated rooms and other drawbacks The proposed hospital will be situated on a site near Regent's Park, opposite the Zoological Gardens and will start with between 60 and 100 beds There will be a graduated scale of fees and it is hoped that the institution will be self supporting

VIENNA LETTER.

(From Our Regular Correspondent)

Exaggeration of the Unhealthfulness of the Air of Towns

VIENNA, Feb 25, 1907

Statistical data are now obtainable in regard to risks to which country born immigrants to the industrial centers are exposed from the change in their mode of life and the different quality of air According to these figures, the dangers are greatly exaggerated. The only significant difference between the health statistics of rural districts and cities is that deaths from phthisis are slightly (3 per cent) more frequent in towns, while cancer and bone diseases (osteomyelitis, caries and fractures), seem to be more frequent in the country The main point of interest is that diseases of the upper air passages and the exanthematous infectious fevers (air borne diseases), are not more common in cities than in the country As the country is less densely populated the absolute figures are different from those of the towns, but the relative figures are nearly the same The effects of smoke, dust and overcrowding have been overestimated, or, perhaps, the country air has been underestimated in its impurity from a medical point of view, but apart from this fact, it has been proved that nervous diseases (hysteria and neurasthenia) are more common in certain rural districts than in many cities

Correspondence

Alcohol in the Navy

SAN JUAN, PORTO RICO, March 6, 1907

To the Editor —The substance of your editorial on this subject in THE JOURNAL, February 16, 1907, is so at variance with my experience that I can not let it go unchallenged, even though your deductions are drawn from the paper of my friend, Dr Lovering

After a service of nearly twenty years, comprising duty on all stations and in many ships, I feel safe in saying that I know of no more generally abstemious class of men than naval officers, no type more keenly appreciative of their responsibilities, no type better qualified for their duties Conscientiousness in the matter of duty is a characteristic of the service. When you see a naval officer, no matter what the conditions he is under, nor where he may be placed, you will find that he will ring true ninety nine times out of a hundred There may be startling exceptions to all this at times, but when they are analyzed it will generally be found that they will not detract from the force of what I have said

Many officers and all enlisted men are total abstainers while on board ship The varied complicated technical problems with which they are confronted and the almost incessant drilling make this advisable in the one case and necessary in the other Let such abstainers go on shore and meet the entanglements with which the navy is beset and they are likely to get into trouble For example, an officer goes to a hospitable club and takes one or two drinks with insistent acquaintances These drinks to the club habitué have little more effect than a like amount of water, while to the abstainer or moderate drinker, on the other hand, they may act as a demoralizing poison completely upsetting him, when he at once becomes conspicuous and is pointed to as another example of a drunken naval officer, often, too by the promoters of his undoing The case is much the same with the men There is no drinking among the men on board ship and comparatively little among the officers as I have said By being in the navy we are more or less conspicuous and are often targets for cruel shafts

You do not know nor do I, what goes on after dark in the homes about us in a civil community How could we know of the extent to which drunkenness exists there? We can not judge of them as they are beyond our reach On the other hand, on board ship the conduct of every officer and man is known every hour of the twenty four, and nothing can be concealed

The number of officers who are intemperate is rapidly growing less and the same may be said of the men Conditions are decidedly better to-day than when I entered the service Drunkenness is certainly on the decrease

A word about the statistics quoted by Dr Lovering They are misleading The common tipple of the British and German sailors is beer or ale Uncle Sam's tars have a liking for whiskey Hard drinks contain eight times as much alcohol as malt liquors and are probably eight times as disastrous to those who over indulge If eight men unused to liquor go on a debauch drinking whisky, with eight men, accustomed to beer, who drink beer only, it is probable that many, if not all, of the whisky drinkers will be unfit for duty afterward and few if any, of the beer habitués The statistical differences quoted are due to two factors, viz., abstention on the one hand and vicious drinks on the other The greater number of admissions for alcoholism in our navy by no means shows that there is eight times as much drunkenness as in the other services The beer sot is quite as unfit for duty as any other, but he is probably eight times as likely to pull out of it, without seeking the sick list, as is his whisky drinking pal

Our navy could not be in better hands, nor under clearer heads, than those that command it to-day As a total abstainer, naturally, I believe that total abstinence would be ideal, that being impossible, moderate indulgence in malt liquors would be a second choice, but as the drinkers have something to say about it and they appear to like hard drinks, over indulgence will be followed by admissions to the sick list

C F STOKES
Surgeon U S Navy

Diphtheria Antitoxin in the Treatment of Bronchial Asthma

PIQUA, OHIO, Feb 26, 1907

To the Editor —After an experience of more than twenty five years in the practice of medicine, the most interesting case I ever saw was one of bronchial asthma The reason this case was of such interest is that I was the patient

It may be taken for granted that I patiently and persistently tried every means for the relief of this condition but still suffered nightly with from one to three attacks, and for six years never escaped a night It is true that I received temporary relief from various remedies but there was always a return of the attack within three or four hours after retiring During these attacks I tried and wore out one remedy after another and I am sure I overlooked nothing that has ever been used by the medical profession for this condition I used inhalations from stramonium leaves to chloroform also stimulants one after another, with but temporary relief After my attention had been called to adrin or adrenalin I used the solution 1 to 1 000 in 5 to 10 minim doses hypodermically, and while I must say that these remedies never failed to relieve an attack yet the condition would return in three or four hours if I went back to bed During all these years of suffering and experimenting I had been looking for some preventive—something that would free me from those nightly attacks At last I arrived at the conclusion that a change of climate would be my only relief Late in October, 1906, I heard of a physician who had had asthma, and while attending a case of diphtheria had given himself a prophylactic injection of 2 000 units of diphtheria antitoxin Strange to say his asthma cleared up It not only protected him against diphtheria but completely relieved his asthma

After some correspondence and knowing from experience it could do no harm, on Nov 14 1906 I injected 4 000 units of Mulford's diphtheria antitoxin I or five days I experienced no result when I had a slight chill followed by a temperature of 102 F urticaria and slight rheumatic pains of joints Since this time I have entirely escaped asthmatic attacks

I have now passed three months without a single attack of asthma, and am in better general health than for many year and feel that the profession should know the results in my case How diphtheria antitoxin prevents asthma I do not know For how long it prevents it I am waiting to find out One thing I do know and that is that it has proved a God send to me I have used the antitoxin in two cases besides my own with good results but too recently to make a report F W S Dick of Columbus has used it in several cases and will no doubt soon report it

From experience I believe diphtheria antitoxin will cure in all cases of bronchial or catarrhal asthma while in nervous asthma I would expect it to do no good

F

Pharmacology

ANTIDYSPEPTICS AND VEHICLES

Comments on Some of the Official Preparations Available for These Uses

The proprietary mixtures which are claimed to supply the system with digestive ferments, and which the Council on Pharmacy and Chemistry has shown to be impossible combinations, have attained wide popularity entirely through persistent advertising However, since they are largely used, they must serve some purpose What is it? Simply that they make excellent vehicles and occasionally are effective as antidyspeptics

AS VEHICLES

The choice of a proper vehicle for nauseous drugs prescribed in solution has received too little attention in the education of physicians In consequence, many physicians have accepted eagerly the solution of the problem offered by the proprietary manufacturer and have fallen into the habit of using these preparations simply as vehicles without reference to their value as digestive agents Apparently physicians forget or do not know that both the Pharmacopeia and the National Formulary furnish us with preparations just as serviceable as vehicles as the proprietary digestives like elixir of lactopepsine pan peptic elixir, peptenzyme elixir etc.

The subject of vehicles, etc, was treated somewhat extensively in one of the series of special articles on the Pharmacopeia and the Physician (THE JOURNAL, June 23, 1906), but it may be worth while again to refer to some of these which should replace the impossible proprietaries

When the attention of a very intelligent physician was called to the impossibility of a mixture containing the substances which the manufacturers of the Elixir of Lactopepsine claim that their preparation contains, he said that he used it simply as a vehicle and laughingly acknowledged that its pretty color had something to do with its popularity so far as he was concerned, and undoubtedly he represented many others The appearance of medicines is well worth the physician's attention not only from the desire to make himself popular with his patients but because of the effect produced by psychic impressions

The addition of some coloring matter is frequently desirable to improve the appearance of medicines, and without doubt much of the popularity of some nostrums is due to their pretty color An attractive bright red color can be communicated to mixtures by the use of about 1 per cent (5 minims to the ounce) of tincture of cudbear (tinctura persionis N F) Carmine will produce a red color in alkaline solutions For brown colors, addition of the compound tincture of cudbear (tinctura persionis co N F) will give the desired result, and for neutral or alkaline solutions glycyrrhizin may be used. For yellow coloring 1 per cent (5 minims to the ounce) of tincture of hydrastis, U S P, may be used

Medicines should be made as palatable as possible and the Pharmacopeia and National Formulary contain some excellent vehicles, especially certain elixirs, which may properly supersede the proprietary vehicles For instance we have elixir aromaticum, U S P, elixir adjuvans U S P, elixir eriodictyi aromaticum, N F elixir taraxaci compositum, N F and the two elixirs of glycyrrhiza The vehicle should be chosen to fit the remedy to be administered, so far as practicable and in this respect a selection from the variety of official preparations has decided advantages over the use of a single proprietary elixir whose exact composition is not known For salts like potassium bromid the elixir aromaticum, U S P, forms an excellent vehicle Thus we may direct

℞	Potassii bromidi	ʒiiss	10
	Elixir aromatici	℥ij	60

M

This mixture contains 10 grains of the bromid to the fluidrachm and is of the same composition as elixir potassii bromidi N F

Sodium salicylate can also be disguised by the use of aromatic elixir If we wish to secure the effect of color at the same time we can add five drops to the ounce of tincture of cudbear (tinctura persionis, N F) Thus

℞	Sodii salicylatis	ʒiiss	10
	Tincturæ persionis	m xv	1
	Elixir aromatici, q s ad	℥iv	120

M Sig Each teaspoonful contains approximately 4½ grains of salicylate of soda

The taste of potassium iodid can be disguised by aromatic elixir in the same way and this vehicle is not surpassed for this purpose by any proprietary digestives

The National Formulary contains a number of other elixirs of special salts which may be used by those who wish to prescribe elegant and palatable mixtures Among these are elixirs of calcium, lithium, and sodium bromids, potassium acetate, salicylic acid and the various salts of iron, for which orange flower water or the syrup of orange flower are acceptable When prolonged use of a remedy such as syrup of hypophosphites is necessary the flavor should be changed from time to time, for example, tincture of vanilla may be substituted for the syrup of orange or lemon

For the purpose of disguising the taste of quinin the preparations of licorice are very suitable Elixir adjuvans, U S P, consists of a mixture of 12 parts of fluid extract of glycyrrhiza with 88 parts of aromatic elixir One may prescribe

℞	Quininæ sulphatis	ʒss	2
	Elixir adjuvantis	℥ij	60

M

This is to be triturated in a mortar and directed to be shaken before taken No acid should be used to dissolve the quinin sulphate, since this would precipitate the glycyrrhizin, the active principle of licorice A drachm of this preparation contains 2 grains of quinin sulphate

Instead of the elixir adjuvans the syrup of glycyrrhiza N F may be used and sometimes may be preferable, as it contains no alcohol Ammonium chlorid is a nauseous salt which is best disguised by syrup of glycyrrhiza

The bitters used as appetizers and as stomachics owe their therapeutic effects to their bitter taste, so that concealment of this taste tends to defeat the purpose for which the medicine is given Still if it is thought best to disguise the taste the syrups form appropriate vehicles Thus we may give nux vomica with syrup of orange, improving the appearance by the use of cudbear if desired

℞	Tincturæ nucis vomicæ	ʒiiss	10
	Tincturæ persionis	m xv	1
	Syrupi aurantii	℥iv	120

M

AS ANTIDYSPEPTICS

All the proprietary antidyspeptic remedies contain alcohol and aromatics, to which, undoubtedly, what therapeutic virtue they really possess, is due In cases of distress after meals the physician, as well as the patient, naturally seeks something to allay the present discomfort while waiting for the result of investigation into the cause of the symptoms and the slow improvement that is apt to attend strictly rational treatment And there are many official remedies that will answer the purpose fully as well as the much vaunted proprietaries

Alcohol has a stimulating action on the functions of the stomach and especially in the form of wine will often relieve the uncomfortable feelings that come on after eating, and herein lies one of the principal reasons for the popularity of mixtures containing alcohol The carminatives, such as cardamom, cinnamon allspice and ginger will give relief in most cases Peppermint chamomile, anise etc., have a well deserved reputation for relieving flatulence, colic, and similar conditions Chloroform is both anodyne and antiseptic and is a valuable remedy in the milder forms of gastralgia Alkalies are often beneficial and especially in hyperacidity, but are frequently given in insufficient doses

While a physician should attempt to individualize in the use of these remedies, sometimes it may be advisable to give them in combination, and the Pharmacopeia and National Formulary present a number of excellent combinations which may be used in such cases As a combination of alcohol and aromatic carminatives, the compound tincture of cardamom, U S P, is superior in safety and efficiency to any nostrum on the market It contains cardamom, cinnamon, caraway, cochineal, glycerin and alcohol In addition to its therapeutic properties it has a pleasing red color, which may serve the purpose of suggestion The tinctura aromatica N F is a similar preparation The average dose of the former is one teaspoonful, of the latter 30 minims Mistura carminativa contains carminatives and alkalies, but it also contains opium, and, therefore, should be used with the presence of that drug in mind, especially when given to infants For adults the amount of opium is so small that a drachm contains only one and a half minims of laudanum Pulvis cretæ aromaticus combines carminatives with an alkali and may be used for hyperacidity The average dose of 2 Gm (30 grains) contains enough alkali to neutralize the free acid in 250 c.c. (8 ounces) of normal stomach contents, so that probably twice this dose should be used for full effect

Incidentally it may be said that most proprietary digestive remedies contain acid, while the majority of cases of dyspepsia require an alkali In cases in which an acid is indicated, however, the dose should be much larger than those afforded by the proprietary mixtures If it has been ascertained that a digestive agent is really needed the simplest way is to prescribe pepsin with large doses of hydrochloric acid which should be well diluted in administration, but if a ready made digestive mixture is desired the liquor pepsini N F may be used, although it also contains an insufficient amount of hydrochloric acid The elixir, essence, and wine of pepsin of the National Formulary are better suited for use as aromatics and stomachics than as digestive agents, but are worthy of consideration as substitutes for the proprietary digestive mixtures

In conclusion, the use of these remedies should be regarded merely as palliative and should not be allowed to obscure the need of thorough investigation and treatment of the disease which underlies the symptoms

The chief value of the digestive ferments should be as pharmaceutical or biologic reagents rather than as true therapeutic agents, namely, for the preparation and predigestion of food articles as indicated in the peptonization of milk

EXAMINATION OF DIGESTIVE FERMENTS

A Further Report on the Digestive Power of Lactopeptine

Dr Charles H Miller, assistant professor of pharmacology, Northwestern University Medical School, has voluntarily conducted some experiments for the purpose of learning whether or not Lactopeptine Powder is effective either as an amylolytic or a proteolytic ferment The following is Professor Miller's report of his experiments, which should be read in connection with the report of the Council on Pharmacy and Chemistry, published last week

Herewith I send report of tests made by myself relative to the digestive powers of Lactopeptine Powder—obtained from an original sealed package Being interested in the examination of digestive ferments, I was prompted to take up Lactopeptine Powder because it is a preparation widely advertised The observations are in accord with the report of your Council, published in THE JOURNAL, March 16

A AMYLOLYTIC POWER ACTION OF PANCREATIN AND DIASTASE.

1 Gelatinized starch paste Subjected to action of Lactopeptine in amount equal to 50 per cent by weight of starch (before cooking) at 100 degrees F for a total of 12 hours Tested hourly for disappearance or modification of starch reaction

No change was observed in mucilaginous consistence of the starch paste or purity of the starch reaction with iodin

Control The same quantity (30 c.c.) of the same starch paste was practically instantaneously changed to a thin liquid, in which the starch reaction was completely lost within five minutes after the addition of 2 c.c. saliva, in other words 2 c.c. of saliva within five minutes converted 1.5 gms. of starch into dextrin and sugar, while 0.66 gm Lactopeptine was without action on the same quantity after 12 hours

2 A second test was made in the same way, except that an alkaline reaction was given with NaHCO

The result was identical No action could be detected.

Control A similar mixture plus 2 c.c. of saliva was converted within five minutes, with disappearance of the starch reaction.

Conclusion It is therefore evident that the preparation contains neither pancreatin nor diastase.

B PROTEOLYTIC POWER ACTION OF PEPSIN

Coagulated egg albumin in glass tubes of 2 cm in length and 5 mm diameter, open at either end and completely filled, was subjected to digestion for a total of 24 hours, at a temperature of 100 F., as follows

Digestant	Quantity	Medium	Results 12 hours	Results 24 hours
Lactopeptine	0.33 Gm	0.2% HCl	1/20 digested	1/10 digested
Lactopeptine	0.33 Gm	H_2O	inactive	inactive
Lactopeptine	0.33 Gm	Alk H_2O	inactive	inactive
Blank	Blank	0.2% HCl	inactive	inactive
Scale pepsin	0.3 Gm	0.2% HCl	1/2 digested	All digested
Pancreatin 5 yr old specimen	0.3 Gm.	Alk H_2O	1/8 digested	1/4 digested
Wampole's papain digestant*	4 Cc	H O	inactive	Inactive

Conclusion Lactopeptine is apparently equivalent in proteolytic power to the Pepsinum Saccharatum of the U S P 1890, which was a 10 per cent preparation and, like it, Lactopeptine is only active in acid media It is devoid of active enzymes other than the pepsin, and while the powder is feebly acid in reaction, no activity could be shown when water was the medium employed CHARLES H MILLER

Miscellany

Campaign Against Malaria in Italy

Passed Assistant Surgeon McLaughlin of the Public Health and Marine Hospital Service makes a further report on the measures taken to preserve health in malarial regions in Italy A summary of his previous report appeared in THE JOURNAL, Dec 22 1906, page 2113 In Italy, from time immemorial the rural population has been stricken by the disease, while the inhabitants of the cities have generally escaped At present the majority of cases both of acute and chronic malaria are found in the country, but railway employés and soldiers suffer greatly from malaria The longest lines of Italian railroads extend along the littorals of the Mediterranean and Adriatic on flat land which is often below sea level The mountains rising above the flat land were formerly covered with forest, but are now perfectly nude Similar conditions exist where the railroads as is often the case follow the course of a river through a wide valley The railroads pass through many sections devoted to the cultivation of rice and the maceration of hemp, and it is not surprising that railroad employés should suffer greatly from malaria So far as the army is concerned there are fortifications and posts in the very worst of these malarial zones The Guardie di Finanza who are considered part of the army, are required to patrol every foot of this malarial coast line

A law of Nov 2 1901, with the object of combating malaria, imposed certain duties on proprietors of land on the employers of labor, and in a word on all persons who had workmen or laborers dependent on them in malarial zones These persons are charged with the duty of diffusing the knowledge of malaria and the means of combating it among the country people and others employed by or dependent on them As the country people are generally unable to read it is necessary for the proprietors to explain verbally the contents of the government publications issued with this object in view One of the most complete is that of the Royal School of Agriculture, at Portici (near Naples), entitled 'Popular Points on the Relation Between Malaria and Agriculture"

Until July 1 1905 all the Italian [illegible] property of the state [illegible] private com[illegible]

* Said to contain pep

Each of these companies had its own special rules regarding malarial zones and the extra compensation allowed workmen employed therein These companies were among the first to conduct experiments on the mechanical protection against mosquitoes by means of wire netting The famous experiments of Professor Grassi, made from March to October, 1905, in the plain of Capaccio, near Salerno, one of the most virulent malarial zones in Italy, placed the theory of mechanical protection against mosquitoes on a firm, practical basis, and the larger part of the expenses of these experiments was paid by the company operating the Mediterranean Railway system When the Italian government took charge of the operation of the railways it became necessary to have uniform regulations regarding all matters, including malaria

All the employés who serve or who have residence in a malarial locality are allowed an increased daily compensation Temporary employés in these districts have no such rights The right to this indemnity is not extended to employés receiving more than 3,000 lire ($570) per annum, or to laborers who receive more than 8 50 lire ($1 62) per diem

The mechanical protection against mosquitoes and the administration of quinin are obligatory under the laws The results as regards the railroads are not yet in evidence, too short a time having elapsed since the government assumed actual control of the railroad system

In April, 1905, the head of the army medical department issued a circular to the directors of health of the various army corps of the kingdom, in which he prescribed the prophylactic and therapeutic measures to be employed against malaria In another circular of the same month he added some important details with regard to registration of cases It is now obligatory in the army to maintain special registers of malarial cases, noting the manner and variety of the infection, the technic of the scientific researches made, and the method of administering the quinin This system has been in practice too short a time to draw conclusions as to results in the army

Eradication of Malaria from an Egyptian City

Some interesting information regarding the eradication of malaria from the city of Ismalia is given in the *Oesterreichische Sanitatswesen*, Vienna

The city of Ismalia was founded in 1862, and now has 30,000 inhabitants It is situated in the government district of the canal on the north shore of Lake Timsah, which is intersected by the canal at about an equal distance between the Red Sea and the Mediterranean The health conditions of Ismalia were considered favorable, but in 1877 malaria broke out in the city with such intensity that by 1880 nearly every inhabitant had been attacked After many unsuccessful attempts to overcome the disease the Suez Canal Company, in 1901, undertook to put into effect active measures for the destruction of mosquitoes, which were beginning to be recognized as agents in the diffusion of malaria These measures were carried out during a period of two years with the result of completely eradicating malaria from the city

Three theoretical methods for the local campaign against malaria were considered 1 Cure by quinin or removal of all fever patients 2 Protection of inhabitants against the bite of mosquitoes 3 Extirpation of mosquitoes (winged insects and larvæ) The canal company adopted two methods The sick and a large number of the unaffected inhabitants were treated with quinin Simultaneously with this treatment a search was begun for anopheles in the vicinity of Ismalia in the adult and larval forms and for the ordinary stinging flies This search was followed by an endeavor to sanitate the ground and standing water and refuse.

The first discovery of anopheles was made about the beginning of August, 1901, at a time when the city generally was free from mosquitoes A few days later they were found to be generally diffused The captured mosquitoes were found for the most part to belong to the variety *Anopheles pharoncnsis*, which are universally present in North Africa, and the *Anopheles chaudoyci*, known in Algeria It was found that the critical season began about July and that a breeding place of the anopheles existed in the eastern part of the city All the stagnant water in the vicinity of Ismalia was examined for anopheles larvæ These were found in every pool and puddle formed in the cultivated land near the town, in the irrigation and drainage canals, and in deposits of water formed by infiltration from the fresh water canal

No larvæ were found on the reeds or water plants along the shore of the canal, and none in the large marshes or in canal water Experiment in the life duration of larvæ after partial drying showed that they recovered their vitality after several hours' exposure on dry sand when placed again in water These conclusions indicated that for the destruction of the anopheles mosquito it was necessary to eliminate all the deposits of water in which the larvæ were found Numerous observations showed further that the culex and stegomyia mosquitoes existed in great numbers throughout the entire year, in ditches, drains, kitchen and laundry waste water and water containers in houses The larvæ of the stinging flies were also found in pools, puddles and drainage canals

On December 27, at a conference of the canal company, it was determined to lay down a definite program for the work of extirpation It was decided to increase the flow of water in the canals New drainage canals were provided, larger water basins were allowed to dry, small depressions were filled with earth or sand, the drainage canals were deepened, and reeds and water plants were cut down or uprooted

Since the completion of this work no mosquito larvæ have been found in the water in the sanitated area, although some isolated anopheles have been found at the beginning of summer in the city itself The place of origin of these isolated mosquitoes is believed to be Nefiche lagoon, which is very irregular in shape and has a shore line covered with small pools The work of drying out part of the marsh and filling in the remainder was begun in the spring of 1906

In order to destroy any mosquitoes that might harbor in houses, a service was organized for the purpose of visiting each house weekly and emptying all standing water or, when that was impossible, oiling the water and treating all sinks and drains with a mixture of crude and refined petroleum

The results of the sanitary work may be stated as follows Since the beginning of 1903, mosquitoes and all varieties of stinging flies, which were previously present at Ismalia, have disappeared, and the inhabitants have been able to dispense with mosquito nets Since the autumn of 1903, no larvæ of the anopheles have been found in the area of sanitation which surrounds the town at a distance of about 1,800 meters from the last house Since 1902, a marked decrease in the prevalence of intermittent fevers has been observed, and since 1903 not one case of malaria has been reported in Ismalia The number of the malarial patients, which in 1877 was 300, rose in 1886 to more than 2,500, in 1902 to more than 1,500, in 1903 was only a little over 200, and in 1905 amounted to only about 50 cases

Isolated anopheles continue to be found in the autumn of each year They are probably conveyed to Ismalia by the wind or by railway or ship travel, and constitute no source of danger to the city The original importation of malaria into Ismalia is referred to the numerous Italian laborers employed on the Ismalian Canal These laborers probably brought the disease with them

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Crusade Against Yellow Fever in Mexico—E Liceaga is president of the national public health service in Mexico, and at the recent meeting of the American Public Health Association at Mexico City in December, he described the methods in vogue for extermination of yellow fever in Mexico They differ to some extent from those employed elsewhere, although based on mosquito transmission In Vera Cruz, for instance, where yellow fever had been endemic for three centuries, the city is divided into districts proportional to the number of resident non immunes Each district is in charge of a physician with a force under him which keeps a record of all the non immunes and visits them daily, in order to discover at once the first appearance of the disease This force also attends to petrolizing and draining away the deposits of water and disinfecting the contaminated houses The sick are placed in previously fumigated, thoroughly screened rooms In order

to be sure that disinfection is complete mosquitoes are introduced into the rooms and placed in conditions unfavorable for the action of the disinfectant Disinfection is not considered complete until all these mosquitoes are killed. The service also has means to prevent the escape of mosquitoes from the contaminated house, even when it is a mere shack (by covering the house with sheets of duck, etc.) The service also keeps sanitary agents on the trains entering or leaving contaminated places, in order to detect cases among the passengers Liceaga pays a high tribute to the states of the republic which placed at once the entire matter of repression of yellow fever in the hands of the central government, thus facilitating concerted action at various points Besides the mosquito brigades in nine different cities, flying brigades are sent to various points on suspicion At the date of his address, December, 1906, not a case of yellow fever had been known throughout the whole land for several months

Improved Technic for Taking Temperature of Body from the Urine—M Engländer has revived the method of taking temperature from the urine, and believes that he has eliminated and overcome the previous objections to this method With his technic he states that the findings of the temperature are more constant than with any other method, while slight fluctuations are more accurately registered His aim was to take the temperature in the flowing stream, in a vessel that did not have to be previously warmed, and he thus uses a funnel made of strong filtering paper As this absorbs the urine at once, there is no need to heat it beforehand The sheet of filtering paper 15×12 cm., is folded once, and again to make a funnel, and the tip is cut off, leaving an opening 8 mm in diameter Two slits are cut in the paper, the diameter of the thermometer, which is slipped through the slits and is thus held in place, the mercury bulb near the opening in the tip of the funnel It is thus laved in the urine passing over it and filling the funnel and in his countless tests with the method he never found the temperature in the axilla quite so high as the temperature of the urine The most constant parallelism was noted in patients in bed or in closed, warm rooms The difference may amount to nearly a degree centigrade under other conditions, even when the thermometer is kept in the axilla for half an hour After long walks, hot baths or the like, the temperature of the urine was from one to one and a half degrees higher than the temperature in the axilla, demonstrating the greater precision of the urine technic The thermometer registers the maximal temperature in from 7 to 12 seconds, even with only 100 to 150 c.c. of urine His communication was summarized in the *Wien. klin. Wochschr.*, xx, 117, 1907

The Barlow Medical Library—The Barlow Medical Library of Los Angeles, Cal., was dedicated and formally turned over to the trustees, February 7 The program of the exercises and the various addresses and speeches delivered at that time are given in full in the *Southern California Practitioner*, February, 1907 As was mentioned in THE JOURNAL, March 2, 1907, page 804, the library building, which cost over $30,000, was the gift of Dr W Jarvis Barlow It is situated near the College of Medicine of the University of Southern California, but the relationship between the two institutions is geographical only In return for having the building erected so close to the college, the latter institution donated nearly 10,000 volumes and publications from its own shelves to the new library The building is a handsome structure, monolithic in character, being constructed largely of re-enforced concrete, making it both fireproof and earthquake proof The library is to be managed entirely by its patron members, this membership being open to any physician who pays annual dues of $25 The use of the books is free to all members of the medical profession and to all medical students The profession in southern California is to be congratulated not only on having a substantial nucleus to the formation of a library but in being the recipient of a handsome and modern building devoted exclusively to library purposes

Fatal Postoperative Myxedema After Thyroidectomy—Garbini relates in the *Riv. di pat. nerv. e ment.* 1906 page 553 a case of severe tetany preceding and accompanying postoperative myxedema in a woman of 36 She presented symptoms of pellagra and brief tetanic spasms at times, with difficulty in swallowing from pressure of a large goiter on the pharynx After total removal of the thyroid gland the previous irritable disposition became a delirium of persecution but the tetany became attenuated The patient succumbed to progressive postoperative myxedema and debility He reviews the literature on the subject and ascribes the tetany to functional insufficiency of the parathyroids, injured or compressed by the enlarged thyroid. Thyroid treatment was instituted too late for it to have much influence on the course of the affection The lesions noted in the nervous system he believes were the result of the action of the toxins circulating in the blood after the total removal of the thyroid and parathyroids, the pathologic anatomic findings explain the symptoms observed The case further shows amply that the hypophysis and thyroid are incapable of vicarious action, and that the products of the hypophysis include both granules and plasmosomes The suppression of one or the other causes a different train of symptoms which explains the variability in the findings of various authors in the clinic and in experimental work

Forty years of Enteric Fever in Philadelphia—The weekly reports of the United States Public Health and Marine Hospital Service give statistics regarding the occurrence of enteric fever in Philadelphia since 1862, which show that the disease has been endemic in that city for the last forty years Study of the conditions present indicates that the disease is water borne, and the distribution of the water supply in the city enables an instructive comparison to be drawn between the effect of filtered and unfiltered water Parts of Philadelphia are supplied with unfiltered water from the Schuylkill and part from the Delaware while other parts are supplied with filtered water The parts supplied with filtered water show decidedly less prevalence of typhoid than those where the water is unfiltered The banks of the Schuylkill are inhabited by an increasing population which pours its sewage into the river to be later drunk by the people of Philadelphia The same is true of the Delaware, which drains another state Legislation to prevent this contamination of the water supply does not seem feasible so that the only resource of Philadelphia is to filter the water An extensive system of water filtration is now in process of construction at this city

The Ideal Medical Journal—Leartus Connor, in the *Bulletin of the American Academy of Medicine*, gives what he considers the most important factors in the make up of a good medical journal It should be one, he writes, that has something to say, says it and then stops Such a journal while expressing views to which we may take exception and giving reasons which we can not accept, is read with pleasure because there is neither ambiguity nor superfluity in the style He believes, further, that a journal should avoid repeating the same facts in the same relations in successive issues, that is, should religiously abstain from rehashing facts stored away in ancient text books that it should have no place for matter that has not been fully digested by the writer In addition Connor would have his journal give its advertisers their due, but he objects to feeding them with food that the subscriber pays for—in short the reading pages should be held exclusively for the subscriber Finally, he wants his journal to do what it can to free from their shackles physicians who are bondsmen to commercial greed Such a journal he believes to be a possibility, and that the time is not distant when medical journals will satisfy the requirements of those even more exacting than he

Peril of the Strong Man—Staff Surgeon A Gaskell I R C S, of the British navy in an appendix to the annual statistical report of the health of the navy for 1905 just issued, makes a severe indictment of the methods of physical training in vogue with British sailors He contends that it is not the man of giant physique and great muscular development who is the really strong man but the man who is constitutionally sound and who has all parts of his body working in perfect union He deprecates the excessive use of gymnastic exercises which while they may enormously develop certain muscles and may give the appearance of robust health are often rather a source of weakness

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION CONTRACT PRACTICE INSURANCE FEES MEDICAL LGISLATION ETC

A Course in Medical Economics

J N MC CORMACK

I was much interested in the communication from my friend, Dr Ingals, in THE JOURNAL, February 9, page 535, in regard to the course in Economics recommended to be established in all medical colleges by the Council on Medical Education I have given much careful thought to this subject on account of its pressing importance to both the profession and the people of this country, and am convinced that the fear of Dr Ingals that there will be difficulty in finding men qualified to fill this chair is more imaginary than real Even if the character and scope of the instruction to be given had not been so fully outlined by the Council, *it is such a practical, common sense work*, there would be so much in the experience of either the successful or the unsuccessful man from which pertinent object lessons could be constantly drawn, that anyone at all endowed with the teaching faculty could readily take it up

For instance, the ordinary principles of honesty and probity, of earning what is demanded by competent, faithful service, which should govern in all business affairs, could be easily elaborated and adapted to the special needs of medical men in such a way as to make them most valuable and impressive The students should have it urged on them until it becomes a conviction and habit of thought and life, that if they do not at the outset, and always, make of themselves the most competent physicians of which their brains are capable, it is criminal for them to practice medicine, and that this criminality is not in the least lessened by the fact that a diploma and license legalizes the sin of omission or commission, or that the grave covers the victims It should be just as impressively urged that if, after qualifying themselves, they consent to practice for a rate of fees so small as to deprive them and their professional neighbors of the literature, equipment and postgraduate facilities essential for constant, up to date service to the people, they are equally criminal The downright dishonesty of a division of fees without the full knowledge of the payor, or of accepting commissions from druggists, should be taught them instead of, as in the past, turning them adrift at graduation without a word to guide them and then criticise them because they go wrong

The responsibility involved in testifying as experts, in accepting positions as pension and insurance examiners, and all similar professional and semi professional duties, the importance of telling the truth, of dealing out fair and even handed justice, regardless of the source of employment or appointment, should not be difficult to teach Justice is being perverted and the profession is being brought into reproach every day, and men high in the ranks of the profession, some of them great teachers, are setting a bad example in these matters, for the lack of such training, and it might be well after the course is well under way to invite many of the faculties to take it In the same way a correct system of medical bookkeeping, the advantages of card index accounts over the old day book and ledger methods, the importance of systematic monthly collections, and the actual benefaction of this plan in the case of wage-earners and other people of small means, while the accounts are small, while they remember and are grateful for the services, could be readily and most profitably taught The importance of, and the reasons for, better business methods, of exacting compensation from ministers and all others who are able to pay for services, to enable the profession to do a far better and more discriminating charity for the real poor, could be easily made plain And all the time it should be insisted on that whenever they stop studying, cease to keep abreast of the times, as honest men, they ought to quit practicing

The Principles of Medical Ethics, the combined and crystalized experience and wisdom of all the centuries, should be read, section by section, and so explained and expounded as to adapt them to all of the complex conditions incident to the life of a physician, indoctrinating them with their real spirit, and making them the chart and compass of all future life The majority of men want to do right The majority of those who go wrong in our profession do so for the lack of instruction rather than from bad intention at the outset The curse and blight of jealousy and evil speaking, confined always to those practicing in the same community, and the universal experience that no one has ever permanently profited by yielding to the temptation to take part in these things, or by the practice of *any of the "Black Arts," should be iterated and reiterated* until the faces of young men are set against these besetting sins The advantages of partnerships, or other methods of converting ours from a competitive into a cooperative profession, and of thus immeasurably increasing its usefulness and power, especially in small towns and country districts, should be made plain and practical

Our system of medical organization, what it means, what it stands for, the value of membership, especially in the county society, the importance of securing this at the first meeting after being licensed, and of acquiring the habit of attending the society and of taking part in every meeting, the possibility of developing the society into a real postgraduate school would all be things easy and pleasant to explain, and could usually be made to determine the success and to double the usefulness of a majority of the students

The very fact that men like Dr Ingals look on the inauguration of this work as difficult only emphasizes the importance of starting it without further delay Next to a proper entrance requirement for all students, this is now by far the most important feature of the reorganization movement For the lack of such training in the past a large part of our profession is now in poverty, and the profession as a whole is constantly crippled in its effectiveness As soon as the necessity for the course is fully realized, it will be easy for any college worthy of the name to develop a competent teacher Those not willing to take the trouble to do this, and thus start their graduates in the right direction, instead of turning them adrift when it is known that a majority of them will make practical shipwreck of their lives, as has been done in the past, should close their doors and let better schools occupy the field I am satisfied that Dr Ingals could teach such a course admirably, after reading the announcement of the Council, and I take pleasure in nominating him for the position in one of the best of the Chicago schools

Urges Illinois Physicians to Favor Legislation.

The Public Policy Committee of the Illinois State Medical Society has issued a circular to the members of the state society, asking their cooperation and assistance in obtaining the passage of bills now in the state legislature, providing for the improvement and enlargement of the public institutions of the state, as well as the establishment of a state epileptic colony and a state sanitarium for the treatment of tuberculosis These projects have been endorsed by the State Board of Charities and have the support of Governor Charles S Deneen It is also proposed to authorize the State Board of Health to distribute free antitoxin and to provide funds for this purpose

Societies Agree on Insurance Fees

The following additional societies have recently adopted resolutions opposing the lowering of insurance examination fees

CABELL COUNTY (WEST VIRGINIA) MEDICAL SOCIETY
MORGAN COUNTY (ALABAMA) MEDICAL SOCIETY
LORAINE COUNTY (OHIO) MEDICAL SOCIETY
CONECUH COUNTY (ALABAMA) MEDICAL SOCIETY
HARRISON COUNTY (MISSISSIPPI) MEDICAL SOCIETY
HEMPSTEAD ACADEMY OF MEDICINE PORTSMOUTH OHIO
FRANKLIN COUNTY (PENNSYLVANIA) MEDICAL SOCIETY
HOUGHTON COUNTY (MICHIGAN) MEDICAL SOCIETY
TIPPECANOE COUNTY (INDIANA) MEDICAL SOCIETY

Pays Full Fee Schedule

Dr W S Kendrick, Atlanta, Ga, Medical Director of the Southern States Life Insurance Company, announces that this company pays medical examiners for all manner of examinations, even the smallest, a fee of $5,, and that it will be the policy of the company to continue this as its minimum fee

County Societies Organized

The physicians of Mercer County, W Va, met at Bluefield and organized the Mercer County Medical Society, electing Dr

J Bee, Princeton, president, Dr D P Crockett, Goodville, and Dr Charles A. Easley, Bluefield, vice presidents, Dr W C Slusher, Bluefield, secretary

The Medical Society of the Twenty fifth Recording District of Indian Territory, formerly known as The Medico Clinical Society, has reorganized and become the Bryan County Medical Society The following officers have been elected for the coming year Dr Albert S Hagood, Durant, president, Dr James L Shuler, Durant, secretary and treasurer The new organization begins work with 18 members

Dr C A Coffelt, councilor for the Twenty fifth District of Missouri, has organized the Webster County Medical Society At a meeting held at Marshfield, February 27, the following officers were elected President, Dr M. Highfiell, Marshfield, vice-president, Dr J A. Rabenau, Fordland, secretary, Dr W R Beatie, Rogersville, treasurer, Dr E M Bailey, Elkland

Discourage Contract Practice

The Tippecanoe County (Ind) Medical Society considered the question of contract practice at a recent meeting A committee appointed to investigate the matter reported that a limited amount of contract practice was being done by physicians of the county not members of the society The society voted that it was the duty of all members to use all honorable means to discourage contract practice

McCormack in Arkansas

In a communication just received, Dr J N McCormack states that he spoke before a joint session of the houses of the Arkansas Legislature at Little Rock, March 14, to a most enthusiastic audience Of course he spoke on the "patent medicine" question He called the attention of the legislators to the fact that the newspapers were subsidized by the "patent medicine" men, and warned them that his talk would not appear in the newspapers the next morning It did not, nor was any reference made to the meeting Several members interrupted him to say that what he said regarding the newspapers was true, as they (the members of the Legislature) had received letters from the papers in the interest of "patent medicines" and against the proposed legislation The Senate had already defeated the Bok bill, otherwise things might have turned out differently in Arkansas

Resolutions for the Year

The Warren County (Pa) Medical Society has issued a program for the year, which contains the following excellent pledge

Resolved That during the coming year I will do all in my power to assist in the uplifting of my profession and the upbuilding of my county medical society I will devote the necessary two or three hours each month to attend the meetings and will endeavor to prove myself an active and willing member

I desire and resolve to be more kindly tolerant of the opinions of my confrères, and to extend to every worthy colleague the degree of courtesy which I would have him extend to me I resolve to stand for true friendship, confraternity and the highest type of professional honor believing this to exemplify the only real types of success worthy of attainment.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

THE SPRAGUE MERCANTILE AGENCY

Following the publication of a letter and comments on this firm in THE JOURNAL last week page 967 we have received a number of letters reporting unpleasant experiences with this agency They give us the decided impression that the writers consider this agency one which it will be well for physicians to leave alone

WHERE MOSQUITOES BREED

HAINES CITY FLA March 12, 1907

To the Editor —Can mosquitoes breed in water that does not contain some admixture of rainwater? L. B OHLINGER M D

ANSWER —Yes Most mosquitoes prefer water that is stagnant or contaminated with sewage or otherwise You will find an interesting article by Dr A H Doty in THE JOURNAL April 26 1905 He says that the different varieties of mosquito have various preferences All need water for the development of their eggs and all varieties except *Culex sollicitans* the mosquito of the salty marshes lay their eggs in water *Culex sollicitans* lays them on the ground where they develop when the ground is flooded *Culex pungens* the ordinary mosquito lays its eggs in water near dwellings, preferring contaminated water and the same appears to be true of the *Stegomyia* while *Anopheles* lays its eggs in cleaner water in shallow pools along the banks of streams etc. As pure rain water contains no peculiar ingredients there is no evident reason why the mosquito eggs could not develop with a supply of water from another source.

EFFECTS OF LIGATION OF THE VASA DEFERENTIA

OWENSBORO KY March 2 1907

To the Editor —Will you please tell me what effect ligation of the vasa deferentia has on the sexual life and organs of the subject. O W RASH

ANSWER.—The normal testicle possesses two functions 1 the production of spermatozoa for the reproduction of the species, and 2 an internal secretion which endows the individual with those qualities known as masculine The escape of the spermatozoa may be prevented without influencing the functions of the testicle as spermatozoa have been aspirated from the testicle many years after division of the vas defereas. The only effect therefore of obstruction of the vasa deferentia as not infrequently happens in bilateral epididymitis or following ligation or resection is to render the individual sterile but not impotent

BAD ENGLISH

CANON CITY, COLO Feb 25 1907

To the Editor —Dr Baldwin in THE JOURNAL Dec. 22, 1906 p 2108 writing concerning the letter of Dr Keen on Bad English p 1579 of THE JOURNAL Nov 10 1906 appears to me to base his criticism on the assumption that what Dr Keen calls an atrocious misuse of the language, in the second instance cited consists in the use of the word case" instead of patient My impression was, and still is that Dr Keen intended to condemn the use of the word operated instead of the words operated on" The use of the word case for patient is in a degree excusable but to say the patient or case was operated instead of operated on is surely an atrocious misuse of the language for which there is no excuse I can not believe that Dr Keen strained at a gnat and swallowed a camel T B MOORE M D

POTENCY OF DIASTASE IN MALT EXTRACTS

BAD AXE Mich March 13 1907

To the Editor —Landois and Sterling's Physiology vol 1 p 256 4th edition (Text book of Human Physiology Landois 10th edition p 266) states that ptyalin differs from diastase—the ferment in germinating grain—insofar that the latter first begins to act at 66 degrees C If that is the case the diastase sold by the manufacturers to the profession either in digesting mixtures or malt extracts is useless D CONNOR

ANSWER.—This statement of Landois is certainly incorrect and probably is an error which arose from the temperature at which the maximum effect occurs being taken for that of the possible action As has been frequently proved by experiment the ferment of malt will convert starch into dextrin and malt sugar through a wide range of temperature and very readily at the temperature of the body 37 C (98 6 F) William H Howell Amer Text book of Physiology vol 1 p 286 2d edition says Diastase shows a maximum action at 50 degrees C and is destroyed at 80 degrees C The National Dispensatory quotes J F C Jungk (*Amer Pharm Jour* June 1883 p 289) as stating that properly prepared extract of malt should convert its own weight of starch into dextrose at 100 degrees C (62 F) in 40 minutes or at 37 8 C. (100 1) in 10 minutes The usefulness of malt extract is much restricted by the fact that salivary and intestinal ferments are almost always present in sufficient amount to dispose of the starch taken as food

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers U S Army week ending March 16 1907

Davis Wm B deputy surgeon general is relieved from station at Governor's Island New York and will take station in New York City in connection with his duties as chief surgeon Department of the East.

Edger B njamin J Jr asst surgeon ordered to proceed from Fort Reno Okla., to Washington D C on March 11 as a witness for the Senate Committee on Military Affairs in the investigation of the Brownsville affair

Kiersted H S asst. surgeon granted 3 months and 17 days leave of absence to take effect on the date of his arrival in the United States from Alaska

Woodruff Charles E surgeon is appointed chief surgeon and chief sanitary officer of the Camp of U S troops and militia to be established at the Jamestown Ter-Centennial Exposition and he will proceed to Norfolk Va and there take station and fulfill the duties at the Exposition grounds in connection with his said duties

Crampton Louis W., deputy surgeon general leave of absence extended 7 days

Marshall John S examining and supervising dental surgeon, granted an extension of fifteen days to his sick leave of absence

Holmes Thomas G contract surgeon, granted an extension of one month to his leave of absence.

Navy Changes.

Changes in the Medical Corps U S Navy for the week ending March 16, 1907

Urie J F surgeon ordered to the Bureau of Medicine and Surgery Navy Department.

Smith F W, asst. surgeon ordered to the Naval Hospital New York N Y

Hayden R asst. surgeon, ordered to the Naval Medical School Hospital Washington D C

Valz, D V asst surgeon, ordered to the Naval Medical School Hospital Washington D C

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended March 13 1907

Kalloch P C surgeon granted leave of absence for 2 days

Amesse, J W P A. surgeon, granted leave of absence for 14 days from May 4 1907

Glover M W P A. surgeon, granted leave of absence for 6 days from Feb 23 1907

Boggess, J S P A. surgeon, granted leave of absence for 7 days from March 17 1907

Ashford F A asst. surgeon relieved from duty at Ellis Island New York and directed to proceed to San Juan Porto Rico reporting to the Commanding Officer of the Revenue Cutter *Algonquin* for duty and assignment to quarters

Goldsborough B W acting asst. surgeon granted extension of leave of absence for 2 days from March 4 1907

Nute A. J acting asst. surgeon granted leave of absence for 2 days on account of sickness from March 3 1907

APPOINTMENTS

Dr Henry Goldthwaite was appointed an acting asst surgeon effective from date of oath

Health Reports.

The following cases of smallpox, yellow fever cholera and plague have been reported to the Surgeon General Public Health and Marine Hospital Service during the week ended March 15 1907

SMALLPOX—UNITED STATES

Florida Anthony Feb 18-24 1 case Jacksonville Feb 24 March 2 1 case Tampa March 2 9 1 case

Georgia Augusta March 5 12 7 cases.

Illinois Belleville Feb 22 March 1 1 case Chicago March 2 9 1 case Galesburg Feb 23-March 9 0 cases Springfield Feb 21 28 1 case

Indiana Elkhart, March 2 9 1 case Lafayette Feb 25 March 11 3 cases Michigan City Feb 1 28 1 case South Bend, Feb 23-March 9 2 cases

Iowa Burlington Feb 1 28 1 case

Kansas Kansas City March 2 9 1 case (imported)

Louisiana New Orleans Feb 23 March 9 40 cases 1 death (11 cases imported)

Massachusetts Chelsea March 2 9 1 case

Michigan Kalamazoo Feb 23-March 9 3 cases

Mississippi Natchez, March 2 9 2 cases

Missouri Jefferson City Jan. 20-March 4 46 cases St Joseph Feb 23-March 2 20 cases St Louis, Feb 23 March 9 3 cases

New York New York, Feb 23 March 2 4 cases

North Carolina Charlotte Feb 23-March 2 1 case

Ohio Columbus Feb 1 28 1 case

South Dakota Sioux Falls Feb 23 March 9 5 cases

Texas Galveston March 1 8 1 case Hunt County Jan 1 March 8 25 cases

Washington Spokane Feb 23-March 2 18 cases

Wisconsin La Crosse Feb 23 March 2, 1 case Milwaukee Feb 23 March 2 8 cases.

SMALLPOX—INSULAR

Philippine Islands Manila, Jan 12 19 4 cases (mild)

SMALLPOX—FOREIGN

Algeria Algiers Feb 16-23 2 deaths

Belgium Brussels Feb 9-16 2 deaths.

Ecuador Guayaquil Feb 9 16 3 deaths.

Egypt Cairo Jan 14 28 3 cases, 1 death

France Paris Feb 9 16 13 cases

Great Britain Bristol Feb 9-23 1 case 1 death Cardiff Feb 16-23 2 cases Dundee 1 case Glasgow Feb 22 March 1 1 case Manchester Feb 16-23 1 case.

India Bombay Jan 29-Feb 12 3 deaths Calcutta Jan 19 26 25 deaths Madras Feb. 2 9 1 death

Mexico Aguas Calientes Feb 16-March 2, 8 deaths Monterey Feb 17 24 2 deaths Nogales Feb 23 March 2 1 case Veracruz Feb 9-23 3 cases 2 deaths

Russia Moscow Feb 2 9 4 cases 2 deaths Odessa Feb 9 16 17 cases 5 deaths St Petersburg Feb 2 9 2 cases

Spain Madrid, Jan 1-31 1 death

YELLOW FEVER.

Brazil Rio de Janeiro Jan 27 Feb 3 1 case 1 death

Ecuador Guayaquil Feb 9 16 10 deaths

CHOLERA—INSULAR

Philippine Islands Provinces Capiz and Negros Occidental Jan 12 19 present.

CHOLERA—FOREIGN

India Bombay Jan 29 Feb 5 1 death Calcutta Jan 19 26 361 deaths Madras Jan 26-Feb 8 4 deaths Rangoon Jan 19 Feb 2, 17 deaths

PLAGUE.

Australia Sydney Jan 5 12 1 case

Brazil Rio de Janeiro Jan 20 Feb 3 34 cases 14 deaths

Chile Antofagasta Feb 2 9 12 cases 4 deaths

China Hongkong Jan 19 26 1 case 1 death

India Bombay Jan 29 Feb 12 166 deaths Calcutta Jan 19 26, 24 deaths Rangoon Jan 19 Feb 2 80 deaths

Peru Catacaos Jan 27 4 cases 3 deaths Chiclayo 14 cases 11 deaths Lima 6 cases, 3 deaths Malabrigo 20 cases Pacasmayo and San Pedro 12 cases 4 deaths Trujillo 11 cases 9 deaths Viru 9 deaths

Marriages

BENJAMIN HOYT, M.D, Mellen, Wis to Miss Maude Rooth inger, formerly of Janesville, Wis, at Baraboo, Wis, March 2

EDWARD QUARLES, M D, Mount Savage, Md, to Mrs Mary Downey Sheridan of Cumberland, Md, in Chicago, March 12

VAL E MILTENBERGER, M D, St Louis, to Miss Jean S Rickey of Callaway County, Mo, at Jefferson City, March 6

CHARLES E STAFFORD M D, to Miss Mabel Sellon, both of Kemmerer, Wyo, recently

FRANK E ESTES M D Denver, Colo, to Miss Ella Stogsdill of Golden, Colo, March 6

Deaths

John Hill Brinton, M.D Jefferson Medical College, Philadelphia, 1852, A M University of Pennsylvania, 1853, and LL D 1901, professor of practice of surgery and clinical surgery in Jefferson Medical College, brigade surgeon of volunteers throughout the Civil War, a member past or present of the Academy of Natural Science, Philadelphia, Philadelphia Pathological Society, American Medical Association, Philadelphia Academy of Surgery, American Surgical Society, and American Philosophical Society, the Mütter lecturer on surgery and pathology in 1869, surgeon to St Joseph's Hospital, Philadelphia Hospital, and Jefferson Medical College Hospital, consulting surgeon to the Philadelphia Hospital, an eminent surgeon and teacher, died at his home in Philadelphia, March 18, aged 75

Charles H Jones, M.D University of Minnesota, College of Medicine and Surgery, Minneapolis, 1890, a member of the American Medical Association, secretary and treasurer of the Territorial Medical Society of Arizona, and a member and later chairman of the Board of Medical Examiners, major and surgeon in the National Guard of the territory, for two terms secretary of the Tempe Normal School board, and one of the most esteemed practitioners and citizens of Arizona, died at his home in Tempe, March 7, from pneumonia, after an illness of one week, aged 41

Henry Carroll Sutton, M D University of Maryland School of Medicine, Baltimore, 1880, of Rome, N Y, a member of the state and county medical societies, health officer of Rome for 20 years, and for three years a coroner of Oneida County, died at the De Soto Sanitarium, Jacksonville, Fla, March 5 from heart disease after an illness of a year, aged 50 At a meeting of the physicians of Rome, March 6, resolutions laudatory of Dr Sutton and regretting his death were unanimously adopted and the physicians of the city decided to attend the funeral in a body

Andrew Jackson Willard, M D Yale University, Medical Department, New Haven, 1877, for two years superintendent of public schools in Burlington, Vt, instructor in chemistry and special professor of hygiene and sanitary science in the Medical Department of the University of Vermont until 1890, and for many years superintendent and resident physician of the Mary Fletcher Hospital in that city, died at the home of his son in Swanton Vt, March 5, after an illness of three years, aged 74

William B Thomas, M.D University of Buffalo (N Y) Medical Department 1857, for nearly 50 years a practitioner of Ionia, Mich, a veteran of the Civil War, in which he served as surgeon of the Twenty first Michigan Volunteer Infantry, United States marshal for the Western District of Michigan in 1866, and five years later superintendent of schools for Ionia County, died at his home March 5, after an invalidism of several years, due to a fall, aged 75

George A Peters, M D University of Toronto, Faculty of Medicine 1886, F R C S, Eng, 1890, professor of surgery and

clinical surgery in his alma mater, surgeon to the Toronto General Hospital and consulting surgeon to the Hospital for Sick Children, lieutenant-colonel in command of the Toronto Light Horse, which he organized, distinguished as a surgeon and teacher, died suddenly at his home in Toronto, March 13 from heart disease, aged 47

Brigadier General John Moore, M.D, Surgeon General, U S Army, retired, who entered the army as lieutenant and assistant surgeon in 1853, was made captain and assistant surgeon five years later, promoted to major and surgeon in 1862, to colonel and medical director of volunteers in 1865 to lieutenant colonel and assistant medical purveyor in 1883, and made surgeon general in 1886, and who was retired Aug 16, 1890, by reason of age, died at his home in Washington, D C, March 18, aged 81

William Baker Crain, M.D University of Pennsylvania, Department of Medicine, Philadelphia, 1860, assistant surgeon of the Twenty second Pennsylvania Volunteer Cavalry and afterward major and surgeon of the Second Maryland Volunteer Infantry, and in charge of the United States military hospitals at Washington, D C., and New Creek, Va, died at his home in Richfield Springs, N Y, from heart disease, March 9, after a brief illness, aged 69

David Bell Kerr, M.D University of Virginia, Medical Department, Charlottesville, 1893, who entered the medical department of the United States Navy June 1, 1898, and was commissioned surgeon April 5, 1905, examining surgeon for the Naval Recruiting Station, Chicago, who had had a total sea service of 6 years and 5 months, died at his home in Chicago, March 19, from cirrhosis of the liver, after an illness of three months, aged 35

Edward W McDonald, M D New York University Medical College, New York City, 1871, a member of the state and county medical societies, the oldest practitioner on the staff of the Waterbury (Conn) Hospital and first president of the Waterbury Celtic Medical Society, died at his home in Waterbury, March 12, from heart disease, after an illness of two weeks, aged 61

William J Butler, M.D University of Pennsylvania, Department of Medicine, Philadelphia, 1885, resident physician of the Philadelphia City Hospital for five years and a member of the staff of Mercy Hospital, Wilkes Barre, died at his home in that city, March 4 two days after a railway accident, in which he was run down by a freight train, while making a professional call, aged 44

Joseph C B Ray, M.D University of Maryland School of Medicine, Baltimore 1888, a member of the American Medical Association, and for a number of years a prominent practitioner of Owensboro, Ky died March 5, from pneumonia, aged 50, at his home in Denver, where he had moved six years ago on account of ill health

Van Lear Perry, M.D Jefferson Medical College Philadelphia, 1892 a member of the American Medical Association, and one of the best known practitioners of Prince George's County Md, died at his home in Hyattsville March 8, from acute gastritis, after an illness of only a few hours, aged 38

Charles S Helman, M.D Miami Medical College, Cincinnati, 1874, a member of the Kentucky State Medical Society, and treasurer of the Kenton and Campbell County Medical Association, local surgeon of the Queen & Crescent Route in Ludlow, Ky., died at his home, March 7, aged 54

Alexander Hill, M.D University of Maryland School of Medicine Baltimore 1874, formerly coroner of Baltimore County and physician to the Baltimore Fire Department, died at his home in that city March 15, three years after an operation for carcinoma of the tongue, aged 51

George Taylor Church, M.D Dartmouth Medical School, Hanover, N H, 1894 sometime principal of the high school at Saratoga Springs N Y., and later superintendent of schools in that village died suddenly at his office in Brooklyn, N Y, March 10, from angina pectoris aged 49

Percival R. Pine, M D Bellevue Hospital Medical College New York City, 1879, of Tipton, Iowa who had been suffering from insomnia and despondency for about two years, died in his office in Tipton March 1 as the result of a self inflicted gunshot wound of the head

Marshall H Waples, M D Jefferson Medical College Philadelphia 1865 formerly physician of Dubuque County Iowa and a lifelong resident of Dubuque died at the Stewart farm near that city, March 6 after a prolonged illness, from cerebral hemorrhage, aged 65

Joseph Wellington Mann, M.D Cincinnati College of Medicine and Surgery 1896, formerly a practitioner at Newtonville, Ohio, but for the last seven years a member of the staff of the Long View Hospital, Cincinnati, died at that institution February 23, aged 42

Cass F Chiler, M.D College of Medicine, Syracuse (N Y) University, 1900, a member of the state and county medical societies, died suddenly at his home in Montezuma N Y March 5, from morphin and atropin, self administered, with suicidal intent, aged 33

Robert M. Huntington, M.D University of Missouri Medical Department Columbia 1861, assistant surgeon in the United States service during the Civil War, died at his home in Hot Springs Ark, March 7, from pneumonia, after an illness of one week, aged 75

John S Ormiston, M.D University of Iowa College of Medicine, Iowa City, 1876, formerly a practitioner of Hartwick Iowa, where he was postmaster until the spring of 1906 when he moved to Purcell, Mo, died at the latter place, February 24 aged 59

Blair Hagerty, Jr, M.D Bennett College of Eclectic Medicine and Surgery, Chicago 1879, a member of the Ohio legislature in 1890 died at his home in Montpelier, Ohio, March 7, *from cerebral hemorrhage, after a brief illness, aged 66*

David H Shenk, M.D Long Island College Hospital, Brooklyn N Y 1874, a member of the state and county medical societies for many years a practitioner of Lancaster, Pa died at his home in that place March 10 aged 55

John Ward Steele, M.D Jefferson Medical College Philadelphia, 1902 of Dover, Del died at St. Agnes' Hospital, Philadelphia, March 4, from peritonitis, three days after an operation for appendicitis aged 30

Frederick E Schacht, M D College of Medicine and Surgery of the University of Minnesota Minneapolis 1903 of Burlington, Wash died in Providence Hospital, Seattle, March 1, from acute nephritis, aged 30

Benjamin F Spencer, M.D Medical College of Ohio Medical Department University of Cincinnati, 1860 died at his home in Newark Ohio March 10 after a short illness, from senile debility, aged 86

Henry Clay Smith, M D University of Wooster, Medical Department Cleveland 1881, died at his home in Kent Wash February 22 from pneumonia, aged 50

Daniel W Cushman, M D Kentucky School of Medicine Louisville 1881, formerly of Cloverland, Ind died at his home in Terre Haute, Ind March 9, aged 52

John D Bryan, M D St Louis (Mo) Medical College, 1870 died at his home in Louisburg Kan February 19, after a short illness aged 63

Joseph E Sansom, M D Rush Medical College Chicago 1878 died at his home in Tipton Iowa February 25 from diabetes aged 55

James J Keane, M.D Long Island College Hospital Brooklyn 1882 died at his home in New York City March 2

Edwin Smith, M D Pulte Medical College Cincinnati, 1877 died at his home in Aurora Ind, March 6, aged 74

Deaths Abroad

Allan Macfadyen, M D University of Edinburgh 1886 an eminent bacteriologist died at the age of 46 as the result of accidental infection with Malta fever After graduation he studied abroad and worked in the laboratories of Berne, Cottingen and Munich He played an active part in the foundation of the Lister Institute of Preventive Medicine and became its director in 1891 His most important scientific work was on the intracellular toxins He developed an improved method for obtaining the cell plasma of pathogenic organisms which consisted in triturating them while frozen to a brittle condition by means of liquid air In this way he was able to obtain the contents of the ruptured cells unaffected by heat or other modifying agents and was led to the conclusion that there are two kinds of bacterial toxins—those such as diphtheria and tetanus which are extracellular and are secreted by the bacteria and those which like the toxins of typhoid and plague are intracellular and are contained within the bacteria Another interesting investigation made by him was on the resistance of bacteria to extreme cold He exposed a series of bacteria to the temperature of liquid air After twenty hours he could detect no impairment in their vitality they grew and became active when restored to the ordinary temperature The same result was obtained when the period of exposure was increased to seven days

Book Notices

VOICE PRODUCTION IN SINGING AND SPEAKING, Based on Scientific Principles By W Mills M A., M.D F R C S Professor of Physiology in McGill University and Lecturer on Vocal Physiology Cloth Pp 282 Price, $2 00 net Philadelphia J B Lippincott Company, 1906

This work contains many facts interesting to voice users It is divided into nineteen methodically arranged chapters The first chapters are devoted to educative methods in voice culture and their results, and to general physiologic considerations It is stated that the "neuro muscular system is of great moment to the voice user," theoretically, it may be useful to recognize certain neuro muscular mechanisms, but practically its application is questionable

The anatomy of the air passages and the physiology of respiration are considered, and the action of the respiratory muscles and diaphragm is clearly detailed and illustrated. A few excellent practical rules are given regarding the use of the breath, for example 'All breath that does not become sound is wasted," and again, "all breath must produce effective vibration of the vocal cords, in right production of tone"

The author inveighs against the wearing of corsets and any compression of waist, chest and neck as being detrimental to proper breathing A most sensible and practical hint is given for the proper use of the breath in the rule "One should breathe through the nose when not using the voice, and through the mouth when one does"

There are also good hints as to methods of practice in right breathing The author intimates that the undue emphasis some writers have laid on diaphragmatic breathing may be due to an effort to counteract the compressive effect of woman's dress Since the voice user should have control of his whole breathing mechanism, a general adoption of vocal training, Mills asserts, might do much toward banishing the corset

In considering the larynx or "voice box," the pupil is urged to become an intelligent student of his own vocal apparatus and to understand and manage it in the most physiologic and artistic manner The physiology and anatomy of the larynx are described, but to the non medical student the description is difficult of understanding, and possibly less detail might have been better

A short comment on sound is followed by a study of the registers of the singing voice, and this is a most important chapter for singers Changes in mechanism of the voice in different parts of the musical scale must be mastered by the vocalist, as it is dangerous to vocal welfare to carry a lower register too high, although a higher register may be carried lower without harm

The resonance chambers are briefly described as a part of the vocal apparatus, and their influence in determining quality of tone is shown The author believes that a respect for the beautiful in the speaking voice should be acquired young and notes the early age at which a large percentage of great singers began their training He calls attention to the important changes which occur in voices at puberty and states at this time great damage may be done, especially to male voices, by improper use Voice production, he declares, should begin with vowel sounds and not words, consonants are too complicated vocally The best language to sing is Italian, because of abundance of vowels English and German are relatively unmusical on account of the prevalence of consonants

NERVOUS DISEASES ORGANIC AND FUNCTIONAL M A. Starr M.D Ph D LL.D Sc.D Professor of Neurology Medical Department of Columbia University in the City of New York Second Edition Thoroughly Revised Cloth. Pp. 816 Illustrations 308 Price $6 00 net. Philadelphia Lea Bros. & Co

The first edition of this work was limited to organic diseases, while the present volume includes the neuroses However, some affections ordinarily embraced in text books on nervous diseases are omitted, thus diseases of the ductless glands and the so called trophic disorders are not included The parts of this work devoted to the anatomy and physiology of the nervous system are, as they should be, brief The volume is a practical work by a practical, well informed man. It is a trustworthy instructor for the student and a reliable and clearly written guide for the practitioner Hypothesis and theory are never confused with fact nor the uncertain with the known

The great bulk of the volume is devoted to organic diseases and this is the better part of the work There are only 85 pages devoted to functional disease, and with 790 pages in the text, this means less than 11 per cent assigned to all of the neuroses combined Naturally, this limitation of space makes itself felt in the different chapters For instance, less than five pages on such a common and distressing affection as migraine do not compare very well with the sixty pages on multiple neuritis Those familiar with Starr's previous work will not be disappointed in the chapter on tumors of the brain It consists of thirty seven pages, and is a model of its kind We can make but three trifling criticisms According to the first table the percentage of operable tumors is 8 and not 10, as stated in the text, it seems that anosmia might have been mentioned as a localizing sign of frontal tumor, and the statement in the final paragraph that Horsley advocates passage of a drainage tube into the subdural space or ventricle for the palliative treatment of tumor is not accurate at this time

One of the best chapters is that on the diagnosis and location of brain diseases The idea of embracing these subjects in one chapter rather than under the head of the various affections of the brain, is an excellent one This chapter is well illustrated and will be of great practical assistance to those not familiar with the subject On the other hand, we doubt the wisdom of omitting a systematic consideration of syphilis of the nervous system The chapter on this subject comprises only about two pages, simply enough to refer the reader to other parts of the book, for instance, that on brain tumor, the spastic paraplegias, bulbar paralysis, etc. It is true that the symptoms of no syphilitic disease of the nervous system are pathognomonic of its etiology, but none the less are there distinctive features of brain syphilis and cord syphilis Besides, the frequency as well as the very diversity of the cases makes it imperative that they be well understood and early recognized Tabes occupies forty four pages, eight of these on treatment, and the chapter is satisfactory in every way The suggestions regarding treatment are excellent, for, although the disease may be incurable, much may be done for those who suffer from it. Chapter XXIX is on general paresis, or dementia paralytica While it properly ranks as a mental disease, it has much in common with other organic affections of the brain Furthermore, it is not sufficiently well known to the general practitioner On the whole, this work can be heartily recommended to both student and practitioner

THE PRACTICE OF OBSTETRICS By Eminent Authorities. Edited by Reuben Peterson A B M.D Professor of Obstetrics and Diseases of Women in the University of Michigan Department of Medicine and Surgery, Ann Arbor Mich Octavo, about 1087 pages with 553 illustrations including 30 full page colored plates Cloth $6 00 net. Philadelphia Lea Brothers & Co 1907

This is the final volume of the Practitioners' Library The profession now has at command in convenient form an authoritative exposition of the latest and best knowledge on three closely interrelated and important specialties The basic subjects of applied pathology and etiology are considered with sufficient fulness to lay the foundation necessary for a fruitful understanding of the practical aspects to which major space is devoted Each author has woven in his own observations of disease and the therapeutic measures which have resulted in the greatest success This adds to each chapter a personal element of obvious value In view of their particular importance in obstetrics, the series of illustrations has been made exceptionally rich, and it is likewise notable for being largely from original photographs taken from life, and a large proportion of them from Dr Peterson's own service in the University of Michigan Maternity

Like its companions, the volume on obstetrics is designed above all to be practical, but theory when it is the key to practice has not been neglected Each contributor has developed his subject in accordance with his own experience, following of course, a plan carefully designed to ensure completeness and uniformity of successive chapters and to cover the whole

domain of obstetrics adequately The disadvantages of repetition and contradiction, which obtain in all text books that are written by several authors, are less conspicuous than usual in the volume before us The work on the breasts and nipples has been repeated three or four times and that on the bladder three times and in one or two places contradictions are noted which will doubtless disappear in the next edition, an event that undoubtedly will soon be necessary The advantages of the multiple authorship are conspicuous in the beautiful and masterly work which has been done by Huber, Wartbin Dorland, Lewis and Senenk on physiology and pathology, extrauterine pregnancy and monstrosities These chapters have never been excelled hitherto in similar works Physiology of the puerperium has been excellently covered by Bacon and Lewis

In the operative work, exception might be taken to the reference to the use of forceps in breech cases, since it is well established, as a rule of practice, that the forceps should not be applied to the breech of the living child Mention of the use of reversed forceps could be omitted also, in our opinion, as a practice too unsettled and questionable to be advocated The technic of vaginal Cesarean section has not been given in sufficient detail for an operation so comparatively recent

In the pathology of pregnancy Nicholson is given credit for Lange's work on the thyroid, but the chapter as a whole is very satisfactory There are some errors in proofreading, which will doubtless disappear in subsequent issues

The work is well designed, well executed and undoubtedly will be appreciated It is hardly necessary to say that the mechanical work has been done in the publishers' best style

THE INTEGRATIVE ACTION OF THE NERVOUS SYSTEM By C S Sherrington D Sc. Hon LL D F R S Holt Professor of Physiology in the University of Liverpool etc. With Illustrations. Cloth Pp 411 Price $3 50 New York Charles Schribner s Sons 1906

The problem discussed in these lectures is the integrative action of the nervous system in building up the complex animal organism The unit mechanism in integration by the nervous system, according to Dr Sherrington, is the reflex, the conception of which embraces that of at least three separable structures—an effector organ, e g, gland cells or muscle cells, a conducting nervous path or conductor leading to that organ, an initiating organ or receptor whence the reaction starts It is by such structures and their combination and coördination, that the multicellular organism is built up from its component parts and becomes an individual instead of a mere jumble of commensual organs The book is therefore a study of reflex action from this special point of view, the titles of the subject treated in the simple reflex, interaction between reflexes, compound reflexes and their simultaneous and successive combinations, reflexes as adapted reactions, some aspects of the reactions of the motor cortex the physiological position and dominance of the brain, sensual fusion—give a slight idea of the line of argument followed the details of which, however, must be followed out in the book itself It is one that calls for careful reading, containing as it does a vast amount of physiologic information, and one also that deserves the attention of the physiologic student, as it contains much matter bearing more or less directly on psychologic questions, especially in the latter part of the book where the subject of volitional control of the reflexes is discussed The author also touches directly on psychologic theory elsewhere, e g, in his remarks on the Lange Sergi-James theories of the emotions The volume forms an excellent work of reference, not only as regards the physiology of the reflexes but also as to certain questions taken up in the newer psychology A bibliography of authorities referred to in the text, including over 300 titles and a very satisfactory index, complete the work

A VICTORIOUS DEFEAT The Story of a Franchise By Charles Frederic Cilliam Illustrated by Ted Ireland Cloth Pp 371 Boston The Roxburgh Publishing Company

Although this is a story by a practicing physician of Columbus, Ohio, the author has avoided talking shop as does the average doctor who for the first time essays light literature There is nothing medical in the story, and the only thing in it of special interest to the doctor is the fact that a doctor wrote it The hero is a young attorney, highminded, honorable, courageous, etc He becomes interested in politics, takes up the people's side in some franchise question, and leads in a fight against a grasping street-car company Love becomes sadly mixed with politics The hero is in love with the only daughter of the leading lawyer of the town, whose enmity he gets first by opposing him for Congress and afterward by appearing on the other side in some important lawsuits All this, however, because he can not do otherwise and remain true to his convictions Most serious of all, however, is the fact that the old gentleman, secretly at first, but openly later, is working for the street car company, in which he has invested all his savings The young man wins out every time and finally is elected to Congress, with the help of the old gentleman, who, of course, becomes his father in law The main interest of the story centers around the fight for civic righteousness, the hero being the leader in the reform movement. The story is captivating and with enough action and plot to hold one's interest without flagging Above all, it is elevating and stimulating to better citizenship

PULMONARY PHTHISIS Its Diagnosis Prognosis and Treatment By H H Thomson M D Visiting Physician to the Consumption Sanatorium of Scotland Bridge of Weir N B Cloth Pp 188 Price $2.00 net. New York William Wood & Company

In dedicating his book on "Pulmonary Phthisis" to the practicing physician, Thomson evidently recognized that it is not adapted to undergraduates The facts apparently are all in, but lack systematic arrangement, the author failing to recognize the limitations of the various divisions of his subject with the consequence that one finds diagnosis, prognosis and treatment rather mixed The book shows a wide and comprehensive view of the subject The points made in diagnosis, prognosis and treatment are such as may be found in any comprehensive article on tuberculosis, there is a good chapter on specific treatment. Dr Thomson finds himself rather at variance with the prevailing ideas of super alimentation and does not recommend more nourishment than for a healthy individual of the same weight, otherwise he is orthodox An appendix on "Tuberculosis in Childhood" is out of the ordinary and worth careful reading The general tone of the work is good, the ideas being conservative and commanding respect on account of the author's extensive experience Mechanically the book is good, the type and paper being especially easy on the eyes

DISEASES OF THE STOMACH A Text Book for Practitioners and Students By M Einhorn M D Professor of Clinical Medicine at the New York Post Graduate Medical School and Hospital etc Fourth edition revised Cloth Pp 559 Price $3 50 net New York William Wood & Company

This edition, while retaining the original plan of the work, has been revised and brought down to date The opening chapter deals briefly with the anatomy and physiology of the stomach Methods of examination are gone over, a hundred pages of the book being devoted to this subject. The various test meals are given and their value and significance stated A chapter is devoted to diet in diseases of the stomach and the great and growing importance attached to this means of treatment both prophylactic and curative, is dwelt on After dealing with the general means of local treatment in stomach diseases the various affections, both organic and functional, are taken up The author speaks in no uncertain tone of the valuelessness of the so called digestants and digestive ferments for which so much is claimed by their manufacturers "I have entirely abandoned the use of pepsin," he says and greatly restricted the administration of hydrochloric acid" In the final chapter the condition of the stomach in diseases of other organs is briefly considered The work is to be commended to both students and practitioners

HYGIENE AND PUBLIC HEALTH By B A Whitelegge C B and C Newman Illustrated Cloth Pp 606 Price $1 75 net Chicago W T Keener & Co 1906

This manual for health officers has been a standard for many years in Great Britain It presents a concise summary of the present position of public health administration with a full description of the duties of municipal health officers

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION Atlantic City June 4 7

American Association of Anatomists Madison Wis March 27 29
Med Assn of District of Columbia, Washington April 2
Tennessee State Medical Assn Nashville April 9
Mississippi State Medical Association, Gulfport April 10
South Carolina Medical Association Bennettsville April 10
Medical Assn of State of Alabama Mobile April 16
Florida Medical Association Tampa, April 17
Med. Soc. of the State of California, Del Monte, April 16-18
Medical Association of Georgia, Savannah April 17
Medical and Chir Faculty of Maryland Baltimore April 23 25
Association of American Medical Colleges, Washington May 6
American Therapeutic Society Washington May 4-7
Amer Assn of Genito-Urinary Surgeons Washington May 7 9
Am Assn of Pathologists and Bacteriologists Washington, May 7 9
American Climatological Association Washington May 7 9
American Gynecological Society Washington May 7 9
Amer Laryngological Association Washington May 7 9
Amer Medico-Psychological Association Washington May 7 9
American Ophthalmological Society Washington May 7 9
American Orthopedic Society Washington May 7 9
American Pediatric Society Washington May 7 9
American Assn of Physicians Washington May 7 9
American Surgical Association Washington May 7 9
Nebraska State Medical Association Lincoln May 7 9
New Mexico Medical Association Las Cruces May 8 9
Texas State Medical Association Mineral Wells May 7
Utah State Medical Association Salt Lake City May 7-8
Kansas Medical Society Kansas City, May 8 10

NEW YORK ACADEMY OF MEDICINE

Regular Meeting, held Feb 21, 1907

DR ROBERT ABBE in the Chair

Nitrogenous Metabolism in Typhoid Fever

DR JAMES EWING presented the analysis of 17 cases, and the most obvious interest is in the relation of the urinary nitrogen and its partition to the clinical symptoms The records show a total urinary nitrogen excretion reaching 27 40 grms on the thirteenth day of a moderately severe case, but averaging considerably below 20 grms With a restricted milk diet, this large percentage of nitrogen must signify consumption of tissue proteids and a marked loss of nitrogen on balance The total nitrogen varied with the temperature and diminished with defervescence when nitrogen retention began The more favorable the condition, the higher the percentage of urea nitrogen A ratio below 70 per cent seems to indicate a grave condition, sharp increase in this ratio is a very favorable sign, a rapid decrease is followed shortly by the death of some patients In some instances the urea ratio seemed to be a better index of the patient's condition than were the temperature and pulse In two fatal cases the ammonia ratio reached 9 per cent and 10 per cent, and in one fleshy woman it was found at 11 per cent The present indications are not that acidosis is a prominent feature of typhoid fever The acetone bodies are not estimated in this series A fall in the urea nitrogen is regularly accompanied by a corresponding rise in the rest nitrogen In two cases a sudden rise in the rest nitrogen with a fall in the urea preceded albuminuria

Among the interesting clinical points are the following Urea ratios below 70 per cent and rest nitrogen above 15 per cent belong to the severer stages and types of the disease. Rapid falls in urea with rises in rest nitrogen occur at unfavorable times in the disease The ammonia nitrogen tends to run comparatively low, but in fatty subjects, severe cases, or before death it may rise to 10 per cent or more of the total nitrogen The character of the nitrogen partition in typhoid fever seems to show some dependence on or relation to the lesions in the liver In typhoid fever the liver, as a rule, shows some intense granular degeneration and usually focal necroses fatty degeneration is not prominent If the final synthesis of urea is largely a function of the liver, the severe damage to the liver may be expected to yield for a time a low percentage of urea in a high total nitrogen output. The absence of extreme acidosis in typhoid fever accords with the usual condition of the typhoid liver The changes in the urine in fatal typhoid fever are very similar to those in acute yellow atrophy and the occurrence of acute yellow atrophy as a termination of typhoid fever is not extremely rare The results show that the disturbance of nitrogenous metabolism is very similar to that of other infections, and in some intoxications which are not of bacterial origin

The conclusion is reached that in typhoid fever and other infectious diseases, an important part of the morbid process consists in a disturbance of nitrogenous metabolism, which is very similar in type to that seen in pure autointoxications, and which, therefore, is not directly connected with the toxins of the invading bacteria What is seen in typhoid fever is not merely the entrance and destructive effect of the typhoid endotoxins, but the burning of 30 pounds of tissue proteid in three weeks Hence, in studying the nitrogenous metabolism, they are obtaining information about one of the fundamental processes going on in the diseased organism

DISCUSSION

DR C G L WOLF emphasized the importance of having a complete twenty four hour specimen of urine, and insisted that the patient should be placed on an accurate standard diet, of which the nitrogen content and the calorific value are accurately known The diet should be free from purin compounds A very careful clinical daily report would help to clear up many of the metabolic vagaries which are encountered in the examination of urines of this type

The Management of the Intestinal Tract in Typhoid Fever

DR WALTER B JAMES considered a few principles underlying the general treatment of the digestive tract in typhoid fever He said that the intelligent energy of the physician finds ample opportunity for exercise in these fields, in the feeding, the nursing, the general management and the treatment of complications of this disease, and they are little able to shorten the course, or even to modify its character

DISCUSSION

DR. GEORGE L PEABODY said that it has often happened to him to have brought under his care patients who have been under no medical care at all, but only under that of relatives or friends, and the stomachs of these patients had been rendered irritable by bad feeding, obstinate vomiting being an early symptom Under these circumstances he insists on rest, with counter irritation to the epigastrium If vomiting persists, he advises against temporizing longer, but resorts to lavage A patient weighing 120 pounds should receive 1,925 calories a day during health, but when there is increased activity and increased metabolism, more should be given Milk alone is not a suitable diet, because too much would be required, five or six pints a day The number of calories can be greatly increased by giving alcohol in some form Eggs are of material aid He uses various modifications of milk, such as kumis or matzoon Clear soups are given throughout the disease Water should be given in abundance Whenever the patient becomes hungry, he gives him solid food He gives ice cream in all stages of the disease Constipation is not evidence of absence of ulceration, nor is diarrhea evidence of the presence of it He has never known a case of perforation to be caused by the giving of cathartics He disregards diarrhea, unless the movements exceed two or three a day If necessary to check it, he gives bismuth or the aqueous extract of opium Meteorism he treats with the rectal tube of small size, he also believes in the use of turpentine, 10 minims every three hours Turpentine stupes are not of much value Surgery is of no avail in intestinal hemorrhage, but in intestinal perforation, nothing but surgery will avail

DR. W GILMAN THOMPSON said that the earlier text books have spoken so much of "gurgling and tenderness in the right iliac fossa," and it is a very striking fact that this pair of symptoms has practically gone out of date, probably due to improved methods of feeding The more one sees of typhoid fever the more he becomes convinced that a great deal of latitude should be allowed in its treatment It is wonderful what a high degree of toleration the human subject has for typhoid fever Of late years he has been treating patients more liberally in regard to diet He gives a milk diet so long as it agrees He gives liberally beef and orange juices There is

nothing in the name "intestinal antiseptics," but there is in intestinal antifermentatives He gives salol and creosote in coated pills, which dissolve only in the intestine, and this aids greatly in keeping down meteorism If the stools become foul and offensive, and there is a tendency to tympanitis, the lower bowel should be cleansed He believes in giving turpentine externally as well as internally Ten per cent of typhoid fever patients would have relapses no matter what the diet is

Treatment of Typhoid Spine.

DR VIRGIL P GIBNEY said that the term typhoid spine carries with it no pathologic commitment. For a long time certain spinal phenomena have been observed in connection with typhoid fever, but no attempt has been made to embody these phenomena in an entity A periostitis of the vertebræ naturally suggests involvement of the articular borders and the foramina of exit of the nerves, and the many cases already on record of bony enlargement are confirmatory of the theory first advanced as the primary pathologic lesion It seems pretty well established by the number of cases recorded that trauma plays a very important factor in the etiology

Dr Gibney claims to have had fairly good results in a reasonable length of time by resorting to fixation of the column, the avoidance of trauma, the free use of the Paquelin cautery, and the subsequent employment of well directed massage and graded exercises The cautery as a counter irritant has proved so valuable in his hands that he feels justified in recommending it above all other counter irritants The simple Knight spinal brace or the posterior spinal assistant of Taylor has proved of more value than the plaster of Paris jacket or corset The criss cross strapping with zinc oxid adhesive plaster has been a valuable adjunct, especially in the milder forms of the disease Potassium iodid has been given in certain cases, but not with any definite results Where deformity exists it is necessary to wear apparatus for longer periods In spinal lesions it is important to immobilize not only the parts involved but those contiguous, and to get an accurate adjustment of the immobilizing apparatus In the very acute cases it is sometimes necessary to supplement this fixation by means of rubber adhesive plaster, criss cross strips, from one inch to two inches in width, and half encircling the body It is important to remember that the apparatus must be worn for months in the average case The object of the apparatus is to prevent trauma The Paquelin cautery is insisted on as a regular line of treatment as long as tenderness and pain on movement exist Even after all tenderness has subsided, it is a good plan to employ the cautery occasionally, say once a week or once in a fortnight.

It has been shown that even these deformities and areas of infiltration, bony or muscular, disappear after a while, and fortified by this assurance the surgeon should decide when to begin the convalescing part of the treatment, namely douches hot baths and systematic, graded exercises, the object of which is to correct the stiffness developed in the muscles which have been for a time out of commission and to restore the tone generally to the spinal column Anodynes and hypnotics are often necessary, and even at times the administration of chloroform He could not recall an instance of a drug habit having been acquired The administration of hypnotics must be left to the individual practitioner with the suggestion that if the aforesaid treatment by fixation and cauterization is carried out that hypnotics will not be in great demand.

DISCUSSION

DR HALSTED MYERS found that out of 500 cases of typhoid fever at St Luke's Hospital not one case of typhoid spine has been recorded There have been cases of periostitis, but in other situations

DR. LEONARD W FLY said that typhoid spine always ends in absolute recovery and he invariably tells his patients that they will be well in from one year to eighteen months No body now agrees with Dr Osler's statement that the disease is a neurosis There is almost always a history of trauma Rest in bed counter irritation and later on the jacket or brace make up the treatment The pain sometimes is so acute as to demand the use of morphin and even anesthetics

BOSTON MEDICAL LIBRARY MEETING

Held Feb 6, 1907

DR RICHARD C CABOT in the Chair

Epidemic Uncinariasis in Porto Rico

DR. BAILEY K. ASHFORD assistant surgeon U S A spoke on the campaign now in progress against this disease It is a social and economic problem and not merely a medical one, for more than 750,000 of the Porto Ricans are infected and 70 per cent of the inhabitants are suffering from its effects Of 600 blood examinations made none gave a hemoglobin percentage of over 40 to 45 per cent. From 5 000 to 7,000 deaths result there from this disease each year or in other words, it is responsible for 20 to 25 per cent of all the deaths on the island Its mode of entrance into the system and progress and development therein are well defined The larvæ present in the mud, penetrate the skin of the bare feet of the laborers enter the veins, pass to the heart and through the pulmonary artery to the lungs Here they break through the walls of the alveoli, enter the bronchioles, pass up the bronchi and trachea, are coughed up and swallowed pass through the œsophagus and stomach and arrive finally at their proper habitat, the jejunum, where they become attached and develop This is practically the only way of infection Almost no case studied could be traced to ingestion and inhalation is not possible for the larvæ die when dried Ninety six per cent of the thousands of cases treated have acknowledged previous or present suffering from ground itch which is uncinarial dermatitis This is almost unknown among those who wear shoes hence a sure though slow way of eliminating the disease is found in wearing shoes The guinea pig is susceptible and experiments made with this animal substantiate many of the above statements

The anemia is due probably to hemolysis the cause for this being some substance not yet determined secreted by the hook worms It certainly is not due to blood abstracted by the worm, for a bloody stool is almost unknown in these cases In only five cases in 10 000 can blood be detected in the stools microscopically Of all the cases examined postmortem only one showed a small ecchymosis in the jejunum this same case showing minute red points when held in the proper light and was not treated by an anthelmintic Moreover, the worm is not a blood sucker and therefore could not thus cause the anemia His food is epithelial cells and not red blood corpuscles This comes from the superficial layers The submucosa is not eroded Some 80 000 worms have been counted by this U S A commission of which Dr Ashford was a member, and none of them appeared to contain blood, but on the contrary they were grayish white easily picked out as they were washed over a black background This same truth has been proven by Leichenstern in regard to the ankylostomata long considered blood suckers

Much study has been given to the kidneys and the urine but rarely has it been complete, because patients when somewhat relieved of their symptoms, wished to leave the hospital and return to work Moreover 24 hour movements were impracticable when active purging formed part of the treatment However 24 cases were pretty thoroughly studied both before and after the administration of the anthelmintic Albumin was sought by three tests boiling with acetic acid the ferrocyanid test and Heller's nitric acid test Sediment was allowed to settle and not centrifugated Reaction was acid always specific gravity low sugar absent no diazo except after B naphthol when it was always present rarely any biliary acids, indican increased urobilin present 20 of the 24 before the administration of the anthelmintic showed a small trace of albumin In 16 it was very small Fifteen of the 6 showed an increase in the amount of albumin after treatment was begun Those who expelled most uncinaria had least increase in this albumin The sediment showed casts mostly small hyaline and granular No blood casts Few epithelial casts 18 of the 24 had casts The average hemoglobin content of these 24 cases were 46 per cent Hence he believes that albumin and casts must be considered as present

ease They are evidences of degeneration rather than inflam mation Thymol and B naphthol are irritants to the kidneys and cause a temporary but not at all serious increase of these evidences in the urine Both these drugs may, however set up a severe nephritis B naphthol is more irritant to the kid neys, but less depressant to the heart than thymol The albu min is not dependent on the anemia, probably Uremia is very rare in Porto Rico B naphthol should be given only to selected cases and few doses

The insular government is doing everything possible, but must continue its work for a long time The physicians of the island are equipping themselves with microscopes and labora tory materials and are doing good work There should be more public laboratory privileges

THE MEDICAL JURISPRUDENCE SOCIETY OF PHILA DELPHIA

Regular Meeting, held Feb 18, 1907

The President ADOLPH EICHHOLZ, ESQ, in the Chair

Some Medicolegal Aspects of Abortion

DR HENRY W CATTELL referred first to the historical side of abortion and quoted interesting data in regard to the Code of Hammurabi and the opinions of the ancient law givers in regard to this subject He then discussed the present views held on the permissibility of ever performing the operation, and cited the extreme views taken by certain members of the Roman Catholic Church that under no circumstances, even when the case is due to the rupture of an extrauterine sac, should an operation be performed in order to save the life of the mother Dr Cattell said that there is no law in the State of Pennsylvania which prevents anyone from offering to perform and making all the arrangements for such a crim inal operation It is only when an individual is arrested in the act, or had performed the operation that legal proceedings can be instituted At the present time there is a bill before the Pennsylvania legislature authorizing the medical examin ing board to revoke the license of any physician by due process of law for performing a criminal operation

DISCUSSION

WILLIAM DRAYTON ESQ, inquired whether it would not be possible in every case of necessary abortion to have present at least three of the medical profession This would remove from miscarriage the element of secrecy which the two pro fessions are anxious to avoid

DR. HENRY BEATES JR said that when in his practice it was necessary to bring on premature birth he notified the coroner and summoned for conference three reputable physi cians

DR. THOMAS H FENTON thought that if there could be a more clearly expressed statute on abortion than that at pres ent in vogue and which would include the giving of testimony, it would be of great value not only in saving misrepresenta tion but in uncovering the men really at fault

WILLIAM W SMITHERS ESQ said that the language of a penal statute is taken for the greatest benefit to the man accused, and that the burden is on the state to prove that he comes within it therefore if the language is vague the ac cused escapes The clause in the statute regarding abortion is verbose and confusing and could well be displaced by some such wording as the following Whoever shall by any means whatsoever commit bring about or attempt to commit or bring about an unlawful abortion or whoever may aid or abet in such abortion or bringing about of such an abortion shall be guilty of a felony

Laws of the Ancient Hebrews Concerning Medical Subjects

DR W S WADSWORTH confined his paper to the Mosaic code as found in the Bible claiming that the code deserved the most careful study, not only because of its historic inter est but because of its provisions which in not a few particu lars are ahead of the most advanced practice in sanitary mat ters at the present time An attempt was made to grasp the conditions existing at the time the code was made with a biologist s grasp of the significance of the regulations The idea was strongly brought out that the laws were taught for the express purpose of keeping the camp clean and the people clean in the sight of their God and that the ceremonialism was only a late degeneration when principles had been con fused or had disappeared

The law taught three great groups of duties (a) to God, (b) to the family, (c) to the brethren The following seven groups of sanitary rules the author said could be found 1 The family and all sexual matters 2 Eating, what is clean and what is unclean 3 Diseases Chiefly leprosies and issues 4 Purifications, isolations examinations and washings 5 The dead and other unclean matter 6 Priestcraft, the only profession recognized 7 The seventh day for rest and re covery of normal

Almost every one of the rules would work directly for the physical betterment of the race The food regulations would probably improve the health of any community, though in tended specially for dwellers in a warm country The subject of leprosies in persons, houses, clothing, etc., was shown to be somewhat vague, but was extremely radical race surgery and probably most beneficial Concerning issues, the old law of isolation was said to be still ahead of most modern prac tice The physical sexual and moral cleanness enjoined, with the other rules, account for the physical endurance of the race The regulation regarding the Sabbath is in large measure re sponsible for the retention of that mental elasticity through out the ages that has enabled the Jews of all times to be citizens of the world in a way not known to any other race

DISCUSSION

DR HENRY LEFFMANN accepted Dr Wadsworth's views on many of the points, although he had often thought that the value and practical results of the Levitical laws had been over rated He asked for further authority for two statements made by Dr Wadsworth (1) Regarding the author's cavalier condemnation of the wine of the Jews It might, perhaps, be assumed, he thought, that they did not possess the variety of quality that is now available, but he finds no reason in the recollection of his own reading that would justify the de cision that their wines were unusually bad In the second place, he was unaware of any basis for Dr Wadsworth's statement that the birth of a female child is evidence of a debilitated condition of the mother Though not having read much recently in this department of biology, he thinks that the trend of opinion among students of sex determination is just the reverse namely that male births are evidence of a falling off in maternal condition He said that many of the Levitical rules are ceremonial in significance, others are based on the experience of the Jews or of the surrounding nations

WILLIAM DRAYTON ESQ, inquired the author's opinion of the abandoning of the study of anatomy and the punishment of the anatomists in the middle ages also, whether dead bodies, under the law, were buried or burned

ADOLPH EICHHOLZ ESQ, inclined to the belief that the notion that many of the observances mentioned were cere monial was not founded on fact The monotheistic idea originally held by the Jews is not the monotheistic idea of the present When they speak of their God, there is always a concession that other nations should have their gods The laws which are laid down for one nation become the religion of that nation and are not purely ceremonial The only slum dwellers who have baths are the Jews In regard to their dietary laws, they are regulated by a law preventing over indulgence, and this law is sacred to the Jew Very few drunk ards have been found among the Jews Except for the nervous condition of the Jews, due probably to the terrible strain under which they have lived since the middle ages, they are, as a rule, a healthy race

DR. WADSWORTH referred to the kind of grapes the wine was made of, to the vessels for holding it and other reasons which argued that perhaps 10 per cent of it was bad With reference to the disposition of dead bodies, he thought the evidence was toward burial rather than burning Further reference was made to the ceremonialism, which later had crept into the code and which did not possess the vitality of the magnificent old law itself

Therapeutics

Hyperidrosis

Internal treatment suitable to the general condition should be instituted When the sweating is confined to the axilla local measures are likely to be of most benefit Crocker ("Diseases of the Skin," third edition), recommends sulphur internally Local cleansing of the skin is of first importance, and this is usually followed by application of some lotion supposed to exert an antihidrotic action After the lotion has had opportunity to take effect the skin should be covered with a dusting powder After the treatment is begun it will be best not to wash the skin, but simply to dry it with the dusting powder Belladonna, in tincture, liniment or ointment, is recommended with a view to suppressing the secretions Astringents are also used for the same purpose, these may consist of zinc sulphate, tannic acid or alum, 0 4 to 6 per cent (2 to 30 grains to the ounce), in water The dusting powder may consist of boric acid with from 1 to 6 per cent (5 to 30 grains to the ounce) of salicylic acid Stelwagon ("Diseases of the Skin"), recommends 1 per cent solution of liquor formaldehydi as a cleansing lotion with the cautious use of stronger lotions for therapeutic purposes

Gerdeck recommends for the soles of the feet a 3 per cent solution of liquor formaldehydi This might be too strong for the axillæ Weiss, in THE JOURNAL A M A, Aug 6, 1904, page 372, cautions against its use for the feet in greater strength than a 5 per cent solution He recommends the use of potassium permanganate according to the following plan, which would probably be also applicable to the axilla

A cleansing bath is first applied, followed by the removal of epidermal débris by the use of a pledget of cotton soaked in benzin This is followed by a 15 minutes' application of a 1 per cent solution (5 grains to the ounce) of potassium permanganate in water Next morning the foot (or axilla) is dusted with the following powder

℞	Potassii permanganatis	ʒiii	12
	Aluminis	gr xv	1
	Talci	ʒviiss	30
	Zinci oxidi	ʒix	35
M	Ft pulvis		

The baths are repeated each evening and the strength of the potassium permanganate solution is increased to 2 per cent after the third bath, to 3 per cent at the beginning of the second week, and finally to 6 per cent

Unna recommends (*N Y Med Jour*, 1905), washing the affected parts with spirits of camphor or with a weak solution of vinegar, and following this with a local application similar to the following

℞	Ichthyoli		
	Spiritus terebinthinæ, ää	ʒv	20
	Ung zinci oxidi	ʒx	40
M	Ft unguentum Sig Apply locally on retiring		

Half a teaspoonful of the following may be rubbed into the hands (or axilla) after washing

℞	Tincturæ belladonnæ	ʒiv	15
	Spiritus odorati, N F	ʒxxiv	95
M			

Brocq recommends (*Archives de Méd et Chir*, 1905), insoles of filter paper, linen or cork saturated with the following mixture, allowed to dry, inserted into the shoes and changed daily Similar pads might be put inside the dress shield

℞	Potassii permanganatis	gr xv	1
	Thymolis	gr viii	5
	Aquæ	ʒxxv	100
M			

The following special lotions and dusting powders have also been recommended

LOTIONS

℞	Naphtholis	ʒi	4
	Glycerini	ʒii	8
	Alcoholis	ʒxx	80
M			
℞	Tincturæ ferri chloridi	ʒviiss	30
	Glycerini	ʒiiss	10
M.			
℞	Quininæ sulphatis	gr lxxv	5
	Acidi tannici	gr xxx	2
	Alcoholis	℥iii	90
	Aquæ	℥viii	240
M.	Ft lotio		
℞	Beta naphthol	ʒiiss	10
	Spiritus odorati (N F)	ʒiv	15
	Alcoholis	℥vi	180
M.	Sig Use as a wash		

DUSTING POWDERS

℞	Pulv sinapis	ʒi	4
	Pulv talci	℥iv	120
M	Ft pulvis Sig To be dusted in the shoes		
℞	Beta naphthol	gr xv	1
	Pulv amyli	℥ii	60
M	Ft. pulvis		
℞	Pulv talci	℥i	30
	Bismuthi subnitratis	℥i 1/3	40
	Potassii permanganatis	gr xlv	3
	Sodii salicylatis	gr xxx	2
	Pulv amyli	℥ii	60
M.	Ft pulvis		
℞	Acidi salicylici	gr xlv	3
	Pulv amyli	ʒiiss	10
	Pulv talci	℥iii	90
	Pulv aluminis	℥iss	45
M	Ft pulvis		
℞	Acidi salicylici	gr xlv	3
	Pulv amyl	ʒvi	25
	Beta naphthol		
	Sodii boratis, ää	ʒiiss	10
	Sodii chloridi	ʒvi	25
M	Sig Apply locally		

The æ ray is said to have been used with benefit

CONSTITUTIONAL TREATMENT

Most cases of excessive sweating from the axilla are of a local nature and require little if any constitutional treatment, but the general condition should be investigated in all cases and obvious departures from the normal corrected

Digestive disturbances may require attention and the mineral acids and stomachic bitters are often useful Disturbance of the intestinal functions may influence the sympathetic nerve and it may be by regulating the bowels that sulphur, which is highly extolled by Crocker acts He recommends a level teaspoonful of precipitated sulphur in milk twice a day, if this causes too much purging it may be combined with astringents, as in the following

℞	Pulveris cretæ co	ʒvi	24
	Pulveris aromatici	ʒii	8
	Sulphuris precipitati	℥i	30
M	Sig A teaspoonful twice daily		

General tonics are often required and benefit is often obtained from full doses of quinin It is doubtful if much effect can be expected from astringents administered internally, but sulphuric acid has been recommended

Ergot also is sometimes effective The most important remedies are those which affect the sympathetic nervous system which undoubtedly controls the production of the perspiration The chief of these is belladonna or atropin 0 0004 gm increased to 0 001 gm. (gr 1/150 to 1/60)

In some cases sweating is due to depression of the respiratory center and in these cases remedies which act as respiratory stimulants such as camphoric acid 1 5 gm to 2 gm (gr xxii to xxx), or menthol 0 1 gm (gr 1½) may be tried

Sage, which has a domestic reputation as a remedy for sweating may be given in an infusion made from [illegible] (gr 1) of sage to 500 c c (one pint) of hot water [illegible] cupful may be taken three times a day (Crocker

Acne.

John V Shoemaker states in the *Med* [illegible] though acne is one of the [illegible]

tions, it can be either limited or cured by remedies, or may terminate spontaneously after the individual has passed the age of puberty and the system is in a state of repose. Among the various internal causes of this disturbance he mentions debilitating conditions and disorders of organs or portions of the economy which have a reflex action on the face, such as gastrointestinal disorders, anemia and uterine diseases. Menstrual irregularities and mental troubles also excite and aggravate acne.

For a patient with a tuberculous diathesis, and who is anemic and complaining of gastrointestinal disturbances, Shoemaker recommends the following mixture to be taken internally:

℞	Liquoris acidi arsenosi	m iii	18
	Strychninæ sulphatis	gr 1/60	001
	Acidi hydrochlorici dil.	m x	60
	Glycerini pepsini (N. F.)	f℥ii 8	

M. Sig.: Two teaspoonfuls in water after each meal.

As regards external treatment, hot wet towels are placed on the face for a few minutes at a time twice daily, followed by light massage of the face and application of the following ointment:

℞	Sulphuris sublimati	gr. xx	1 30
	Creosoti	m. xv	1
	Unguenti zinci oxidi		
	Unguenti aquæ rosæ, ää	ʒss	2

M. et ft. unguentum. Sig.: Rub in well night and morning.

Hygienic measures are of the utmost importance in acne, and especially in scrofulous subjects. Frequent bathing of the body is essential to promote a more healthy and vigorous action of the skin. If the patient can bear cold douching over the body, or a cold sponge, it should be employed daily. Fresh air and sunlight are necessary to these patients, but the most important item of all is proper food. Food that is indigestible and unwholesome such as pastries, jams, sweetmeats, pickles and cheese, should always be avoided. Only plain, well cooked, nutritious foods should be taken.

Pepsin in Alkali Pills

In reply to a correspondent who asks if the addition of pepsin would be permissible in a prescription like the following:

℞	Olei santali		
	Olei copaibæ		
	Olei cubebæ, ää	ʒii 8	
	Magnesii oxidi q. s.		

Ft. pil. No. lx.

the *Druggists Circular* states that pepsin is rendered inert by alkalies, even so weak an alkali as magnesium oxid. Consequently it is a waste of good pepsin to add it to such a mixture. A different excipient might be used which would permit its addition. The *Druggists Circular* states that wheat flour is a much better excipient than magnesia for the oils, that a combination of wax and flour is still better, and that with either of these the pepsin might be advantageously used.

Medicolegal

Pregnancy and Life Insurance.

The Supreme Court of Nebraska holds, in the case of Merriam vs. Grand Lodge Degree of Honor, that where a married woman is the holder of a policy of life insurance, it is not a false representation for her to sign a certificate when she is pregnant, stating that she is in sound bodily health, if the certificate is otherwise true. Also, that where a married woman is an applicant for life insurance in a company that issues policies on the lives of married women, she is not required to inform the company of evidence of pregnancy discovered subsequently to her physical examination and application. The Supreme Court Commissioners say in the case that it will not do in sound morals, for an insurance company to issue risks on the lives of married women between the ages of 18 and 45 years without anticipating the probability of the holders of such policies obeying the divine mandate to be fruitful and multiply and replenish the earth, and a condition, either in the by laws, articles of association, or certificate of benefit, providing for a forfeiture in the event that the holder should become pregnant at any time, would be clearly void as against the highest principles of religion, morality and common decency. Consequently, when an application is made and approved, there is no duty on the holder of the certificate issued on such application to notify the company of any subsequently discovered evidence of pregnancy, nor would the fact, if subsequently discovered, prevent her from certifying that she was in sound bodily health, if such certificate is otherwise true.

Physician Lacking Experience Still an Expert.

The Supreme Court of Oregon says that in the homicide case of State vs. Megorden a physician called in behalf of the state testified that he was a regularly graduated, licensed and practicing physician, residing at Ontario, Ore., and had been practicing five years. He was then asked what the effect of a blow on a person's head, describing it as detailed by two preceding witnesses, would have as to dazing or confusing the person, and answered that it would affect his reasoning faculties for a few moments. Before answering, the witness stated that he had never seen or had a case so struck in that place. An objection to the question on the ground that the witness was not qualified as an expert was overruled. The point raised by this exception was whether or not want of experience in exactly such a case as the one in question is sufficient to disqualify a practicing physician and surgeon of general experience in his profession. Rogers on Expert Testimony, chapter 52, says: "If the witness is a physician or surgeon, he is not incompetent to express an opinion, because of his want of observation of any case like the one in question. It is not necessary, to qualify a medical witness to testify as an expert on the subject of wounds, that he should have actually seen the wound in question. His testimony may be based on a description of a wound given in court by those who saw it." The want of experience or knowledge of the particular wound in question would not affect the competency of the witness if otherwise qualified, but might lessen the weight given to his testimony. In People vs. Thacker, 108 Mich. 652, 660, it was held that a practicing physician, a graduate of a college of medicine and surgery, and duly licensed to practice, could testify regarding a case of poisoning although it did not appear that he had ever treated a person who had been poisoned or seen one treated by other physicians. The court therein quoted with approval from Rogers on Expert Testimony, page 45, as follows: "A witness, otherwise qualified, may express an opinion on a matter pertaining to his special calling or profession, although his knowledge of that particular matter has been derived from study rather than from actual experience. It is the doctrine of the courts that study of a matter without actual experience in regard to it may qualify a witness as an expert." And further, page 99: "The principle is well established that physicians and surgeons of practice and experience are experts in medicine and surgery, and that their opinions are admissible in evidence on questions that are strictly and legitimately embraced in their profession and practice." The witness in this case was regularly graduated in medicine and surgery, and was duly licensed to practice his profession in this state, and, being such, under the authorities above cited he was competent to give his opinion on the matter in question by virtue of his general knowledge within the scope of his profession, although he had no experience or special knowledge of the wound in question.

"Rheumatism" Includes Rheumatic Fever

The Supreme Judicial Court of Maine says, in the case of Holmes vs. Continental Casualty Company, that the plaintiff was insured by a policy of accident insurance issued by the defendant, in which the latter, on the conditions named in the policy, promised to pay the insured an illness indemnity for the time, after the first week, that he was confined in the house and regularly visited by a physician, by reason of acute illness, though in the case of illness resulting from rheumatism, etc., the limit of the company's liability should be one tenth of the amount which would otherwise be payable under the

policy During the period covered by the policy the plaintiff was sick with rheumatic fever, and was entitled, under the contract of insurance, to recover the sum of $40, unless that amount should be reduced to one tenth thereof by reason of the provision in the policy last quoted The question was, therefore whether rheumatic fever was included by the term "rheumatism," as that word was used in the policy The contention of the plaintiff was that by the use of this word the parties meant chronic rheumatism, that rheumatic fever is an acute sickness or disease, and consequently was not included within the meaning of the word, that there was no reason why the company should have excluded from the full benefit of its indemnity a person suffering with any acute sickness But, the court says, the parties did not use any adjective descriptive of the kind of rheumatism intended They simply used the word "rheumatism" which is defined in the Century Dictionary as follows "The disease specifically known as acute articular rheumatism The name including also subacute and chronic forms apparently of the same causation" In the same dictionary acute articular rheumatism is thus defined "An acute febrile disease, with pains and inflammation of the joints as the prominent symptoms" The plaintiff suffered with rheumatic fever, which is acute articular rheumatism This is the first definition given in the Century Dictionary of the word "rheumatism," as above quoted Rheumatism may be either articular or muscular, and it may be either acute or chronic. The court is unable to say that by the use of this word in the contract the parties intended to include one form and exclude another Apparently they used the word with its ordinary meaning, which includes all forms, articular and muscular acute and chronic. The disease with which the plaintiff suffered, although acute, was one form of rheumatism, and must be considered to have been included within the meaning of the word as it was used in the policy

License Alone Does Not Make a Medical Expert.

The Court of Criminal Appeals of Texas holds, in Smith vs State, that a person not being a graduate of any school of medicine, not being shown to have read any books on surgery, or to have been at all familiar with gunshot wounds, his mere license to practice medicine, even predicated on the granting of this license by a medical board, does not qualify him as an expert, to testify regarding the fatal character of a wound

Admissibility of Questions on Physician's Damages

The Supreme Court of Alabama says, on the appeal of Dunn & Lallande Bros vs Gunn, that this action, which was brought by the latter party, a physician, was for the recovery of damages for personal injuries caused by the alleged negligence of the defendants in cutting a ditch across a road, which had been for many years traveled by the public generally, on foot on horseback and in vehicles, and negligently leaving it open, without taking sufficient precautions to prevent persons driving on said road from falling into the same On the trial the following questions numbered for convenience, were propounded by his attorney to the plaintiff, while being examined as a witness in his own behalf "1 Can you do your practice as conveniently and agreeably as you could before you were injured? 2 State what per cent your practice has decreased since you were injured 3 You stated in your cross examination that your skill as physician is as great now as it was before you were injured Please state if your ability to prosecute your profession is as great now as it was before you were injured, and if not, what per cent has your ability to practice your profession decreased since you were injured 4 State what amount had been your average practice per month before you were injured 5 What per cent has the average amount per month you make out of your practice decreased since you were injured?" The questions numbered 1 and 4 called for competent and legal evidence, and the objections to them were properly overruled Those numbered 2 and 5 called for irrelevant testimony, such as was not within the issue made up by the pleadings The complaint did not claim damages on account of loss of business sustained by the plaintiff on account of the injuries sustained by him But the court is not to be understood as committing itself to the proposition that such damages would be recoverable, even if laid in the complaint The motion to exclude the answer to the third question should have been sustained, for the same reason as above laid down for sustaining objections to questions 2 and 5 as not being within the issues made by the pleadings, and in that it expressed the mere opinion of the witness

Child of Naturalized Parent Excluded for Trachoma.

The Supreme Court of the United States holds, in the case of Zartarian vs Billings United States Commissioner of Immigration at the Port of Boston that the petitioner's daughter between 15 and 16 years of age, who had never been in the United States, although her father had become a naturalized citizen thereof, was properly debarred from landing on the finding of the board of inquiry that she had a dangerous contagious disease, to wit trachoma, section 2 of the act of March 3 1903, providing among other things that certain classes of aliens shall be excluded from admission to the United States, including "persons afflicted with a loathsome or with a contagious disease" Furthermore the statute the court says, makes the finding of the board of inquiry final, so far as review by the courts is concerned, the only appeal being to certain officers of the department Congress has made provision concerning an alien's wife or minor child suffering from contagious disease, when such alien has made a declaration of his intention to become a citizen, and when such disease was contracted on board the ship in which they came, holding *them under regulations of the Secretary of the Treasury* until it shall be determined whether the disorder will be easily curable or whether such wife or child can be permitted to land without danger to other persons, requiring that they shall not be deported until such facts are ascertained But Congress has not said that an alien child who has never dwelt in the United States, coming to join a naturalized parent, may land when afflicted with a dangerous contagious disease As this subject is entirely within congressional control, the matter must rest there it is only for the courts to apply the law as they find it

Entries of Deceased Physician as Evidence

The Supreme Court of Missouri, Division No 2 says, in the case of Knapp vs St Louis Trust Company an action to contest the validity of the will of a Mrs Margaret Caffey that the account book of a deceased physician contained entries of which the following is a fair sample

"1890 Mrs Marg Gaffey 5888 Cabanne Place		
June 24	Hyperemia of Brain, 1 visit and Med	$2 00
June 24	By cash paid	2 00'

The court thinks that the entries were admissible in evidence in the case, not only for the purpose of showing that at certain dates the physician rendered medical services to Mrs Caffey, and was paid therefor, but also for the purpose of showing that he treated her for hyperemia of the brain and for softening of the brain and paralysis, and that the Circuit Court erred in holding otherwise.

Insanity After Murder

The Supreme Court of Washington says, in the case of State vs Superior Court of King County, that on a trial for murder the only insanity that can be pleaded as a defense must have existed at the date of the alleged crime Suppose it was apparent that when called for trial, the defendant in a murder case was a raving maniac Would it be contended that a court of justice in any civilized country would proceed with his trial on the indictment or information pre ented against him? Such a suggestion would be shocking to every sense of humanity Still one not so violent might be equally insane and the trial should proceed no more in the one case than in the other There is no statute directing that a person while insane may be tried for murder Such a statute would be in conflict with the fe tions and the well e tablished p Criminal courts are pe ed for a whether one accused of crim is sane of all his constitutional ri his trial

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

New York Medical Journal.

March 9

1 *Academies of Medicine. C L. Dana, New York.
2 *Physical Processes of Immunity and Infection J Wright, New York
3 Clinical Observations on the Use of Cotarnine Phthalate C A von Ramdohr New York
4 Mutual Obligations of Surgeons and Internists in the Development of Gastroenterology H W Bettmann, Cincinnati.
5 *Trichiniasis. A H Mellersh and M. H Fussell Philadelphia
6 Cancer Treated by Trypsin. W J Morton New York
7 Scarlet Fever Its Treatment at the Hospital for Scarlet Fever and Diphtheria, New York City E L Kellogg New York
8 *Indigestion Its Significance and Diagnosis H F Stoll, Hartford Conn
9 Value of Differential Leucocyte Counts in Medicine I S Wile, New York

1 —See abstract in THE JOURNAL, Feb 2, 1907, page 442

2 **Physical Processes of Immunity and Infection.**—This is the second paper on this subject by Wright. In it he discusses the portals of entry and the channels of infection

5 **Trichiniasis**—Mellersh and Fussell report a typical case which presents practically all the salient features of the ordinary attack of trichiniasis

8 **Indigestion**—Stoll insists on the importance of making a careful investigation into the causes of indigestion in order that a rational method of treatment may be employed with satisfactory results

Boston Medical and Surgical Journal.

March 7

10 *Diagnosis of Tumors with Special Reference to the Evil Results of Overconfidence and Delay M. H Richardson Cambridge
11 *Experimental Incisions Through the Abdominal Wall of Cats J T Murphy Boston
12 Proper Inspection of Immigrants and School Children in Regard to the Occurrence of Trachoma H Derby Boston
13 *Conservation of Hearing in Operations on the Mastoid Region W S Bryant, New York
14 Complete Suprapubic Prostatectomy Under Nitrous Oxid Gas Anesthesia G Walker, Baltimore

10 **Diagnosis of Tumors**—Richardson thinks it most desirable, because most beneficial, that all tumors should be regarded as malignant until they are proven benign, and inasmuch as no tumors can be proved benign while they are still in the body, all tumors should, if possible, be removed.

11 **Experimental Incision Through Abdominal Wall.**—From careful experimentation Murphy learned that suturing the incision in the abdominal wall in layers gives a more satisfactory and stronger looking wound histologically than the *en masse* suture Wounds sutured in layers were the stronger after two weeks, the strength of the scar having been tested by an actual pull Judged from a histologic study, the suture in layers is more desirable than the suture *en masse* because in this way in the process of repair the strong trabecular tissue arising by proliferation from the fascia unites with tissue of its own kind thereby increasing the strength of the scar and decreasing the time necessary for repair He says that the method of closing the abdominal incision with suture of the fascia in layers, and with a deep supporting stitch meets this theoretical requirement of careful approximation of layers and also the practical requirement of strength and obliteration, so far as possible of all dead space Murphy urges that violent manipulation of the edges of an abdominal incision should be avoided with the same care as has been recognized as essential to good results in the handling of the intestines or stomach

13 **Conservation of Hearing in Mastoid Operations.**—Bryant claims that the maximum postoperative hearing is obtained by judicious preservation of the sound conducting mechanism and by the most rapid possible convalescence of the middle ear

Medical Record, New York.

March 9

15 *Salt Free Diet in Chronic Parenchymatous Nephritis G L Peabody New York.
16 *Influenza Complicated by Mastoid Abscess and Leptomeningitis H B Mills and N C Ward Philadelphia
17 Typhoid Complicated by Multiple Abscesses of the Kidneys and Lobar Pneumonia L. N Boston Philadelphia
18 Prevention of Disease E. E Lelid, Norfolk Va
19 *The Hand of Iron in the Glove of Rubber R T Morris, New York
20 *Intra Abdominal Abscess Due to Gonorrheal and Bacterium Coli Infection Complicating Pregnancy S Strauss New York.

15 **Salt-Free Diet in Nephritis**—Peabody emphasizes the importance of the dechloridation treatment in cases of general anasarca from chronic parenchymatous nephritis with failing heart power He says that its effect is perhaps enhanced by the simultaneous administration of heart tonics, such as digitalis and theobromin, preferably the latter Peabody says that while clonic irrigations with hot sodium bicarbonate solution and catharsis are of value in some cases, the most important agent is the negative one referred to After complete removal of the edema he administers progressively increasing daily quantities of salt, carefully watching for any recurrence of the edema, the endeavor being to ascertain the exact salt equilibrium for each patient He is not yet prepared to report results

16 **Influenza with Fatal Complications**—The points of especial interest in the case reported by Mills and Ward are the following An attack of influenza was followed by mastoid abscess, suppuration and necrosis of the ethmoid An operation was done and the patient was relieved of his symptoms, except the headache Then there developed suddenly violent pain in the head, with unconsciousness for nine days, restlessness, high remittent temperature, and finally death At the necropsy there was found a purulent leptomeningitis with pus in the cerebral ventricles No localizing symptoms had been noted during life

19 **The Use of Rubber Gloves**—In this paper Morris decries the use of rubber gloves in surgery He declares that it leads to slow work, necessitates long incisions, and reduces the natural resistance of the patient He believes, however, that rubber gloves may be useful in the following conditions 1 When there is no infection or other condition to call out the patient's natural resistance to infection 2 When dressings are to be changed for several patients in succession, or when the surgeon operates on an uninfected patient shortly after operating on an infected one. Rubber gloves Morris declares, are not needed 1 When infection is already under way and the patient has developed his own protection 2 When a disease like cancer has called out such a degree of protection that it would be almost impossible to infect the patient 3 When no infection or other disease is present, but when slow or extensive operating necessitated by clumsy gloves will allow more bacteria to fall into the wound than would be carried in by well prepared bare hands

20 **Intra-abdominal Abscess**—The complication referred to by Strauss was diagnosed during the third month of pregnancy The case is unique in that it lacked the usual constitutional symptoms of pus formation, and the apparent local signs were only those of uterine gestation, complicated by the gastrointestinal symptoms of pregnancy Combined vaginal and abdominal drainage was established, and the patient made an uneventful recovery She aborted three days after the operation A bacteriologic examination of the pus found showed gonococci and colon bacilli

Colorado Medicine, Denver

February

21 *New Method of Delivering Head in Breech Cases T M Burns Denver
22 Suggestions to County Society T M B Dower
23 Administrative Control of Tuberculosis in City and County of Denver H Sewell Denver
24 Tuberculosis of Cattle How It May Be Repressed and Its Relation to the Public Health M White Denver

21 **New Method of Delivering Head in Breech Cases**—The method described by Burns is a modification of the Prague method He has employed it satisfactorily in 10 cases As soon as the shoulders are born the fetal body is lifted upward and the fetal back is laid on the abdomen of the mother An assistant is asked to grasp the fetus by the feet and to pull, with considerable force toward the mother's head The operator, facing the vulva with both hands grasps the fetal shoulders, placing the palms on the front of the shoulders and the fingers on the upper part of the shoulders then with such steady force as may be necessary, he pulls pushing the shoulders

directly against the front of the pubes and toward the lower abdomen. The head is delivered slowly when the fetus is not asphyxiated and there is danger of considerable laceration of the perineum The striking difference between this and others' methods is that it produces extreme extension of the head instead of flexion, it converts the fetus into a strong immobile rod, and causes a quick, easy and safe delivery of the head.

Texas State Journal of Medicine, Fort Worth.
February

25 *The Conveyance of Typhoid. W Shropshire, Yoakum, Texas
26 Roentgen ray Treatment of Skin Cancer J M Martin, Dallas.
27 A Massive Rhinolith Weight 43 Grains. B L. Scott, Waco
28 *Ichthyosis J B Shelmire Dallas
29 Treatment of Skin Diseases by the Roentgen Ray G D Bond, Hillsboro
30 The Rural Tenant Household and Tuberculosis S D Naylor Stephenville
31 The Business Side of General Medicine J E Dildy Lampasas
32 *Acute Septic Osteomyelitis W Keiller Galveston

25 Conveyance of Typhoid.—Shropshire believes that personal contact and infected drinking water are uncommon agents in the conveyance of typhoid, whereas flies and dust are common agents of infection

28 Ichthyosis.—Shelmire reports a case of ichthyosis occurring in a woman 26 years of age Portions of the palms and soles were the only parts not affected by the disease The patient had also lost most of her hair and eyebrows Under thyroid extract treatment, alkaline and bran baths and olive oil inunctions she improved very much, but on neglecting the treatment she soon relapsed into her former condition

32 Acute Septic Osteomyelitis.—Keiller reports three cases which illustrate that some of these patients will get well even though their condition may have remained undiagnosed and consequently wrongly treated for months

Surgery, Gynecology and Obstetrics, Chicago
January

33 Radical Abdominal Operation in Carcinoma of Cervix Uteri E. Wertheim Vienna, Austria
34 *Excision of Scapula for Malignant Growth I J Lutz St. Louis, Mo
35 *Sarcoma of the Male Breast F G Connell Oshkosh Wis.
36 *Modern Surgery of the Kidney H Kümmell
37 *Suprapubic Cystotomy with Retrograde Catheterization in Traumatic Rupture of Urethra A. Dixon Henderson Ky
38 *Temperatures Occurring During the Puerperium G H Ryder New York City
39 *Control or Elimination of Pneumothorax in Pleuropulmonary Interventions D Tait, San Francisco
40 *Operations on Jaw Bone and Face V P Blair St Louis Mo
41 *Fractures C A. Parker Chicago
42 *Technic of Hip-joint Amputation B B Cates Knoxville Tenn
43 *Examination of the Uterine Scrapings T McDonald, New York
44 Dr Fernand Henrotin N Senn Chicago

34 Excision of Scapula.—The clinical features of the case reported by Lutz made the diagnosis of sarcoma of the scapula an easy one. The tumor grew from the anterior margin of the body of the scapula and was of the periosteal variety The scapula was extirpated Amputation of the arm was considered unnecessary by reason of the non involvement of the joint structures The tumor was easily peeled out of the axilla The function of the joint so far as performing the ordinary excursions of the shoulder is concerned, is restored to about one half of what is normal The closure of the capsular ligament, after separating it from the neck of the scapula, formed to a limited extent a substitute for an articular socket

35.—See abstract in THE JOURNAL, Sept 22, 1906, page 957

36 Surgery of Kidney.—Kümmell discusses the achievements of modern surgery of the kidney from the standpoint of diagnosis and therapeutics He has done 404 operations on the kidney, including 189 nephrectomies 133 nephrotomies 6 resections 45 fixations 11 decapsulations, 12 incisions of pararenephritic abscesses and 8 ureteral implantations The mortality was 12.6 per cent Among the nephrectomized patients the mortality was 4.7 per cent

37.—See abstract in THE JOURNAL, Oct 20, 1906, page 1402

38 Temperatures Occurring During the Puerperium.—The causes of rise in temperature referred to by Ryder are distended breasts mastitis pyelitis puerperal toxemia, simple retention of lochia, anteflexion and retroflexion of the uterus excitement, septicemia, localized infections outside the uterus, phlegmasia alba dolens

39 Elimination of Pneumothorax in Thoracic Surgery.—Tait believes that Delagenière's method is unquestionably the most valuable of the surgical methods for controlling pneumothorax The Fell O'Dwyer apparatus may answer in an emergency, but the uncontrolled pressure thereby exerted on the entire mediastinum may prove very injurious to even a normal heart Tait states that experience alone will tell the value of the addition of physiologic methods to the technic of intrathoracic surgery and decide the choice between the simple positive and the complicated negative pressure apparatus

40 Operations on Jaw Bone and Face.—Blair presents the results of a study of the etiology and of the pathologic anatomy of developmental mal relations of the maxilla and mandible to each other and to the facial outline, and discusses their operative treatment when beyond the scope of the orthodontist.

41 Fractures.—The 250 skeletons examined by Parker were all of adults but came to the dissecting room through the usual channels of the county morgue and a hospital for the insane The number presenting fractures (only *intra vitam* fractures were recorded) was 106, 95 males and 11 females The total number of fractures, including as single instances certain multiple fractures was 182 The fractures were present in 42.4 per cent of all skeletons Thirty five per cent of all the fractures were of the ribs and practically one fourth (64) of the skeletons presented evidences of fractured ribs Next in frequency came fractures of the nasal bones, 36 cases. Fracture limited to the nasal processes of the superior maxillæ were observed in 11 skeletons Two fractures involved the cranium Five skeletons presented fractures of the spine The transverse processes of the vertebræ were fractured four times, the scapula five times, the clavicle eight times, the humerus seven times, the ulna five times the radius twice, the femur four times the patella once, the tibia and fibula eight times, the tibia alone once, the fibula alone three times the bones of the foot ten times the pelvis twice No fractures were observed in the hyoid bone sternum coccyx bones of the hand and wrist and some of the individual bones of the skull and tarsus

42. Hip Joint Amputation.—Cates reports five cases of successful hip joint amputation done in three instances by Wyeth's method and in two instances by the dissecting method

43 Examination of Uterine Scrapings.—McDonald describes a short method of examining the uterine scrapings The scrapings are immediately put into salt solution and kept there until the examination is made They are then taken out and placed on firm soft blotting paper After the excess of fluid is drawn away the blotter is carefully laid in a mixture of alcohol (95 per cent) and formalin (10 per cent) for one hour Each scraping is then cut into small size (1 cm square) immersed in 95 per cent alcohol for one hour, absolute alcohol one hour, aniline oil one hour xylol one hour, paraffin one hour It is then ready to be embedded

American Journal of Obstetrics, New York
February

47 *Management of Bowel of Doubtful Vitality in Operations for Relief of Strangulated Hernia and Intestinal Obstruction R B Hall Cincinnati
48 Abdominal Sinuses L R Pierce Newburgh N Y
47 *Levelitis Complicating Pregnancy H Meek London Ontario
48 Should the Appendix Be Removed as a Matter of Course When the Abdomen has been Opened for Other Condition A J Smith
49 Vaginal Cesarean Section and Its Application C T Hirst New York
50 *Etiology and Treatment of the Neuroses of Infancy and Childhood C N Acker Washington D C
51 *Case of Complete Longitudinal Vaginal Septum Obstructing Labor I H Coston Birmingham Ala
52 *Immediate Results of Conservative Operative Measures on Tubes and Ovaries H Lo Cleveland O
53 *Do Recent Results Justify Partial Removal of Uterine Appendages When Operating for Inflammatory Disease J Krug New York
54 *Id.—L C Baldwin Brooklyn
55 Maternal Dystocia from High Posterior Uterine Implantation of Placenta Previa R O Lowden M F Lake Denver
56 *Strangulated Hernia A H Shands Washington D C

45.—See abstract in THE JOURNAL, Oct. 13, 1906, page 1219.

47. Pyelitis Complicating Pregnancy.—In three cases seen by Meek the pyelitis started between the fifth and sixth month of pregnancy. The prognosis is favorable under proper medical treatment and the interruption of pregnancy is seldom, if ever, necessary.

50. Neuroses in Infancy.—Acker reports one case showing the effect of heredity in chorea and two cases illustrating the good effects of change of surroundings in cases of choreic convulsions.

51. Vaginal Septum Obstructing Labor.—In the case reported by Coston a complete longitudinal section was found extending from the introitus vaginæ to the cervix uteri and closely connected to it and to both anterior and posterior vaginal walls. This septum divided the canal into two separate compartments, through each of which the os could be felt. The uterus was normal.

52. Conservative Operations on Tubes and Ovaries.—Robb presents a very thorough analysis of 419 cases for the purpose of emphasizing the value of conservative operations on the ovaries and tubes.

53. Partial Removal of Uterine Appendages.—Krug reports the histories of three patients to show that it is necessary to individualize and to treat every case according to its own aspect. It is impossible to generalize, he declares.

54. Id.—Baldwin leaves the slightest fringe of ovarian tissue wherever this is possible, but leaves only such tubal tissue as is beyond question normal.

56. Strangulated Hernia.—Shands reports a case of strangulated right inguinal hernia in which it was necessary to resect about three inches of gangrenous intestine. On account of the poor condition of the patient no attempt was made to do a radical operation. On the third day it was seen that the abdominal wall had sloughed, leaving a large suppurating wound. This was remedied later and the patient left the hospital nine weeks after the operation in excellent condition.

Bulletin of the Lying-in Hospital of the City of New York.

December

57 *Effects of Gonorrhea in Mother on the Early Nutrition of the Child. R. W. Lobenstine and J. A. Harrar, New York.
58 Myoma of Uterus Complicating Delivery and Necessitating Subsegment Hysterectomy. J. W. Markoe, New York.
59 The Urine in Pregnancy. F. E. Sondern, New York.
60 *Simultaneous Malarial Infection in Mother and Baby. M. H. Brown, New York.

57. Effects of Gonorrhea on Child.—Lobenstine and Harrar studied 250 breast fed infants during the first ten days of life. In 50 of the mothers the gonococcus was demonstrated in the genital tract. The findings are summarized as follows: 1. The average birth weight of babies of gonorrheal mothers is less than that of babies of normal mothers. 2. The average initial loss is more pronounced in the gonorrheal babies (5.82 per cent., as against 4.74 per cent.). 3. The amount of loss regained on the tenth day is only 10.9 per cent. in the gonorrheal babies, as against 49.3 per cent. in the normal babies. 4. The gonorrheal babies show both more temperature disturbance and more intestinal disturbance than normal babies. 5. The babies of non-gonorrheal febrile mothers show a greater average initial loss than the normal babies, and do not regain at the time of discharge but 5.3 per cent. of their loss, as against 4.9 per cent. in normal babies.

60. Simultaneous Malarial Infection in Both Mother and Child.—Brown found the plasmodium of malaria present in the blood in both mother and baby. Both patients recovered under appropriate treatment. The baby received calomel grain one-tenth, every fifteen minutes for ten doses, followed by bisulphate of quinin in aqueous solution, grains 2, three times a day, begun on the third day after the temperature rose to 104.4 F. The temperature then became normal, and continued normal until the fifth day, when it suddenly rose to 100 F., so the dose of quinin bisulphate was increased to 3 grains, three times a day, which controlled the temperature. An organic preparation of iron was then given to overcome the anemia, one-half dram three times a day.

The American Journal of Orthopedic Surgery, Philadelphia.

January

61 Exceptional Rachitic Distortions of Legs. W. Blanchard, Chicago.
62 *Influence of Necrosis Produced by Sutures in Tendon Suture and Transplantation. D. Silver, Pittsburg.
63 Scoliosis Caused by Injury of Abdominal Muscle. E. W. Ryerson, Chicago.
64 *New Form of Shoemaker's Last. A. G. Cook.
65 Coxa Valga. B. Galeazzi, Milan, Italy.
66 Coxa Valga or Collum Valgum. J. K. Young.
67 *Reduction of Congenital Luxation of Hip by Manipulation. G. G. Davis, Philadelphia.
68 Pott's Disease. C. Riely, Baltimore.
69 Congenital Hypertrophy of Leg. W. E. Blodgett, Detroit.
70 Attachment to Bradford Frame for Holding Head. W. E. Blodgett.

62. Suture Necrosis in Tendon Surgery.—Silver is convinced that many of the failures in tendon suture and transplantation are due to insufficiency of the suture. He has made this subject one of special study in order to determine whether the necrosis of tendon tissue may reach such a degree as to endanger the stability of the suture. He found that yielding of the tendon in tendon suture and transplantation through necrosis produced by over tight sutures must occur, if at all, very rarely, when the sutures are tied under ordinary tension. The process of repair was found to be slower in tendon transplantation than in tendon suture and tenotomy. Silver advises that care should be taken not to separate the tendon from the surrounding tissue for any greater distance than is absolutely necessary, and to preserve and suture the sheath as far as possible.

64. New Form of Shoemaker's Last.—Cook points out a way by which the orthopedic surgeon can obtain any kind of shoe he wishes and have it fit. The shoes are made over plaster of Paris casts of the feet as follows. Seat the patient in a comfortable chair, the foot hanging down and the muscles relaxed. Then completely cover the foot with a thin layer of vaselin and place a small strip of lead over its dorsal surface. Now, apply a plaster of Paris bandage, incorporating in the last few turns of bandage a steel plate cut in the form of the sole and heel of an ordinary shoe. Place the foot on the floor with the foot flexed to the right angle, and carefully mold and rub in the plaster of Paris bandage until it has set. To remove the cast cut down over the piece of lead, spring the cut edges a little, and pull off as you would a boot. After removing the cast approximate the cut edges, tie with a string or bandage, and it is ready to fill with plaster of Paris cream. When the plaster of Paris has thoroughly set the original mold, including the steel foot piece, is stripped off, leaving a perfect model of the foot, in the position it assumes when an ordinary shoe is worn. To make the last complete it is only necessary to add a graceful toe, which can easily be built on with a little practice. Finally, saw the last in two at the instep, making a shoulder to prevent slipping. Tack on a small piece of leather to steady it, and cover the last with a stocking. The shoe is now lasted and bottomed in the usual manner. To remove the last pull the heel piece out of the stocking. Then pull out the stocking and you have the toe piece. The heel is put on after the shoe is taken from the last.

67. Reduction of Congenital Hip Dislocation.—The object of Davis' method is to exert the maximum of force with the greatest degree of safety to the patient. The child is placed face downward on the table with its pelvis resting on a sand pillow and the leg to be operated hanging down over the edge of the table. An assistant now grasps the knee with one hand and the shaft of the femur beneath with the other and flexes and slightly abducts the limb, steadying and supporting it against his body. The surgeon then places his hands over the head of the bone and the trochanter and presses downward with the weight of his body. As the pelvis is supported by the sand pillow this tends to push the head of the bone forward. This manipulation is repeated, the surgeon gradually abducting the thigh (raising the knee) more and more until the amount of abduction desired is obtained. Davis says that in some instances the head of the femur is felt to glide forward, in others it seems to "crunch" (crush) forward, and in others it jumps forward with a distinct click. After it has once been pushed forward it can readily be luxated and re-

placed at will In difficult cases the thigh should be well flexed and the femur well supported by the assistant with one hand at the knee and the other on the shaft. Tenotomy of the adductor longus tendon is always done previous to attempting reductions This method has been used in five cases, the patients varying in age from 3½ to 8 years, and reduction was effected in all without either difficulty or accident. One patient had previously been treated unsuccessfully by the usual method by another surgeon

American Journal of Urology, New York.

February

71 *Lipoma and Liposarcoma of the Kidney C. Hartwig Germany
72 *Case of Essential Unilateral Hematuria Nephrectomy J W Keefe Providence
73 *Calculus of Bladder G K. Swinburne, New York.
74 Hematospermia. E W Ruggles, Rochester

71 Lipoma and Liposarcoma of Kidney.—Hartwig reports a case of liposarcoma of the right kidney which was extirpated The patient died

72 Essential Unilateral Hematuria and Nephrectomy.—In the case reported by Keefe nephrectomy was done successfully on a man aged 38 for essential unilateral hematuria

73 Vesical Calculus.—Swinburne has performed litholapaxy 11 times and suprapubic cystotomy for stone once He prefers general anesthesia, the anesthetic to be given by a trained anesthetist

New York State Journal of Medicine.

February

75 Address President s Medical Society of the State of New York. J D Bryant New York
76 Substitution and its Remedy C T Brandow Locke N Y
77 Medical Charities of Manhattan and the Bronx. F L Lattimore Philadelphia
78 History of the Medical Society of the State of New York J J Walsh New York

Virginia Medical Semi Monthly, Richmond

February 22

79 Cancer in Fisherville District Augusta County Va. A. L Tynes Fisherville Va.
80 Professional Discourtesy A B Greiner Rural Retreat Va.
81 Flat Foot. W P Matthews Richmond Va.
82 Adenoids J L Rent Lynchburg Va.
83 Use of Adrenalin During Ether Anesthesia C S Venable, Charlottesville Va
84 Fractures—Their Medicolegal Importance J T Graham Wytheville Va
85 *Proprietary Preparations as Affecting Scientific Therapeutics. W J Innes Brookneal Va
86 Medical Treatment of Diseases of the Bile Tract M P Rucker Manchester, Va
87 Empyema M S Martin Stuart, Va
88 Principles of Surgery S McGuire Richmond.

85 Proprietaries and Scientific Therapeutics.—Innes is of the opinion that a number of physicians prescribe remedies without knowing the nature of the drugs contained therein, basing their assurance as to the potency of these remedies not on information derived from well known accredited authorities but on the testimony of unknown writers who are often men of narrow vision and of limited experience, and who form hasty conclusions Many of these remedies are new and have not been tested sufficiently to warrant any real estimate of their value Innes says that two qualifications mark the accomplished physician—diagnostic skill and therapeutic ability Therapeutics he considers the most important branch of medicine because it is only as a therapist that the patient has any use for the physician The remedy for this state of affairs he asserts, is to conform to official remedies, and the profession should see to it that the U S Pharmacopeia covers the ground of therapeutic needs adequately so that physicians can limit themselves entirely to official preparations Innes insists that special attention in the way of practical instruction in clinical therapeutics and prescription writing should be given the undergraduate and that he be educated to avoid contracting the proprietary habit The work of the Council on Pharmacy and Chemistry of the American Medical Association is commended highly

Journal of the Arkansas Medical Society, Little Rock

February 1

89 *Dislocation and Fracture of Humerus at Upper Third L. I Willis Newport
90 *Intestinal Obstruction T F Kittrell Texarkana.

89 Dislocation and Fracture of Humerus.—As the result of a fall from a tree Willis' patient sustained an upward dislocation of the shoulder with fracture of the humerus near the surgical neck The upper end of the lower fragment was projected upward and almost through the soft parts Medical aid was not sought until 33 days after the accident. The patient had had fever and chills for 30 days About 10 days after the accident occurred the right shoulder, arm and pectoral region became almost black The patient was put on antimalarial treatment for three days and then a free incision was made over the outer aspect of the right shoulder The head of the humerus and about two and one-half inches of shaft was split half in two longitudinally The head was forced back into the glenoid fossa, the two fragments were wired together, as were also the upper and lower fragments of the humerus The patient made an uneventful recovery and was able to use his arm with ease and freedom When last seen he was using ax, crosscut saw and maul and did not complain of pain or weakness

90 Intestinal Obstruction.—Kittrell reports five cases of intestinal obstruction The causes of the obstruction were tuberculous peritonitis intussusception, cicatricial constriction, gunshot wounds of the intestine and obstruction due to an unknown cause occurring in a man who fell and sustained a fracture of the femur In this case there had been no bowel movement for three days and there was enormous abdominal distension The abdomen was opened but no cause for the obstruction could be found The patient died a few hours after the operation He had suffered from a similar attack several years previously

California State Journal of Medicine, San Francisco

February

91 Retiring President s Address, Santa Clara (Cal) Medical Society J L Asay
92 Operations on the Thyroid Gland W I Terry San Francisco
93 *President s Address Los Angeles County (Cal) Medical Association F E C Mattison Pasadena

93 Nostrums and Proprietaries.—Mattison devotes most of his address to the discussion of what has been done by lay and medical journals to help the medical profession to educate the public as to the evil effects of the use of nostrums He also advocates the notification of all communicable diseases and the thorough disinfection of premises occupied by any one suffering from a communicable disease

Alienist and Neurologist, St. Louis.

February

94 Psychologic Studies of Man s Moral Evolution A S Ashmead New York
95 Erotic Symbolism H Ellis Cornwall England
96 Neurones in the Light of Our Present Knowledge J Collins and E C Zabriskie New York
97 Alcohol in Therapeutics C H Hughes St Louis
98 Recurrent Functional as Distinguished from the Typical Organic Dementia Senilis of Literature C H Hughes St Louis

Journal of the South Carolina Medical Association, Greenville

February 21

99 Medical Organization President s Address Fourth Medical Association (S C) H I Black Spartanburg S C
100 Non Professional Misinterpretation of Common Symptoms I J Carroll Summerville S C
101 Hydrophobia D Furman Greenville S C
102 The Business Side of Medicine J Ivon Ninetysix S C
103 Lobar Pneumonia—Its Etiology Pathology and Treatment H L Shaw Fountain Inn S C
104 Study of Therapeutics A S Todd Manning S C

Philippine Journal of Science, Manila (Supplement V)

December

105 Enumeration of Philippine Cramineæ with Keys to Genera and Species. E D Merrill

The Medical Herald, St Joseph

March

106 Notes on Postoperative Peritoneal Adhesions I A Mellgrott Omaha Neb
108 Corn Nuclein W I Waugh Chicago
107 Heart Disease in Obstetric Cases M Stryker Omaha
109 Tuberculosis of Joints T F Lotter St Joseph
110 Operative Treatment of Gonorrhœa in the Male A C Stokes Omaha
111 Tuberculous Lymphangitis E L Walker Hot Springs
112 Relations of the Minister and the Medical Profession V V Pure Nevada Mo
113 Diseases of the Kidneys with Cardinal Symptoms A Jeans Nevada Mo

Interstate Medical Journal, St. Louis.

(Annual Progress Number)

February

114 Therapeutics W Engelbach, St. Louis
115 Genitourinary Surgery H McC Johnson St. Louis.
116 Gynecology and Obstetrics. H Ehrenfest, St. Louis.
117 Neurology and Psychiatry S I Schwab St. Louis.
118 Laryngology and Otology W E. Sauer St. Louis.
119 Dermatology and Syphilis. M F Engman St. Louis.

St. Louis Medical Review

March 2.

120 Treatment of Gallstones J C Morfit St Louis
121 Relation of Certain Abnormal Ocular Conditions to the Etiology of General Neuroses N M. Semple, St. Louis.

Lancet-Clinic, Cincinnati

February 23

122 Training of the Child with Reference to Prevention of Nervous Diseases P Zenner Cincinnati
123 Asthma with Mixed Infection Following Repeated Attacks of Influenza. W F Waugh Chicago

March 2.

124 After treatment of Suppurative Abdominal Drainage Cases C T Souther Cincinnati
125 *Present Status of Acute and Chronic Suppuration of the Middle Ear J A. Stucky Lexington

March 9

126 Foreign Body in the Larynx and Tracheobronchial Tract. L. D Brose, Evansville, Ind.
127 Operations for Pyothorax. S Graves St Louis
128 Treatment of Alopecia. E S McKee Cincinnati
129 Treatment of Acute Catarrhal Bronchitis. G F Butler, Chicago

125—This article has appeared in the *Kentucky Medical Journal*, February, 1907

FOREIGN

Titles marked with an asterisk (*) are abstracted below Clinical lectures single case reports and trials of new drugs and artificial foods are omitted unless of exceptional interest.

British Medical Journal.

February 23

1 *Treatment of Lachrymal Obstruction J H Parsons
2 *The Lachrymal Sac in Economy of Vision J J Evans
3 *Nervcism of Illumination in Man E M Brockbank.
4 *Milroy Lecture on Kala azar L. Rogers
5 *Case of Cerebrospinal Meningitis J S Darling and W J Wilson

1 **Treatment of Lachrymal Obstruction**—Parsons says that in the majority of cases of lachrymal obstruction caused by inflammation of the lachrymal sac and nasal duct, syringing, properly carried out, results in complete cure, if the case has never been treated with probes If syringing fails, extirpation of the lachrymal sac is indicated

2 **Lachrymal Sac in Economy of Vision.**—According to Evans, excision of the lachrymal sac is indicated in the following conditions 1 Cases of dacryocystitis which have resisted conservative treatment by probing, etc, for three months or more The radical treatment is more urgently called for when probing causes acute suffering, when the patient has already suffered from corneal complications, and when there is disease of the bony walls of the lachrymal canal 2 In cases in which the dacryocystitis is bilateral and the patient has already lost one eye from hypopyon ulcer, the removal of the sac on the side of the healthy eye is a matter of extreme economic necessity At present insurance companies are loth to insure a workman who has lost one eye, but if the danger of a double dacryocystitis became common knowledge, probably all such cases would be refused absolutely 3 As a preliminary to operations on the eyeball in cases of dacryocystitis Here again the necessity for the operation becomes absolute if the fellow eye has already been lost through postoperative infection from the lachrymal sac 4 In diseases of the sac which endanger general health—for example, tubercle and malignant growths 5 Lachrymal fistula

3 **Rumination.**—Brockbank has under observation several members of one family in which rumination has occurred, or is occurring in at least three generations, probably four, and there are signs of its onset in the fifth generation The family is healthy as a whole Males and females are affected with equal frequency All the cases are of a simple variety

4 **Kala Azar**—In this lecture Rogers reviews what is known of this affection and analyzes several epidemics that occurred in Ind a

5 **Cerebrospinal Meningitis**—Darling and Wilson report a case of cerebrospinal meningitis from which they obtained a pleomorphic diplococcus in pure culture from three different samples of cerebrospinal fluid taken by lumbar puncture The coccus assumed a bacillary form on Conradi Drigalski media, did not liquefy gelatin, clotted milk, produced no indol, produced no gas in sugar containing media, and was pathogenic for rabbits The authors conclude that this meningeal diplococcus belongs to the *Streptococcus fecalis* group and is identical with the *Micrococcus rheumaticus*

The Lancet, London

February 23

6 *Objects of Hunter s Life and Manner in Which He Accomplished Them H T Butlin
7 *Milroy Lectures on Kala Azar L. Rogers.
8 *Lettsomian Lectures on Diagnosis and Localization of Cerebral Tumors C E Beevor
9 *Conditions of Blood Vessels During Shock J D Malcolm
10 *Infective Endocarditis Cured by Inoculation of a Vaccine Prepared from Organisms in Patient s Blood J Barr, W B Bell and S R Douglas
11 *New Method of Fixation of the Bones in Excision of the Knee E W H Groves
12 *Affections of the Pancreas S Phillips
13 Preliminary Note on Rinné s Test R Lake
14 *Cellulitis of the Spermatic Cord. F C. Madden
15 Rôle of Blood Plasma in Disease. H Campbell

6—See abstract in THE JOURNAL, March 16, page 974, paragraph 10

7 **Kala-Azar**—See abstract No 4

8 **Cerebral Tumors**—In this lecture Beevor discusses the tumors situated in the region of the cortex in front of the ascending frontal convolution and comprising the superior, middle and inferior frontal convolutions

9 **Condition of Blood Vessels During Shock.**—Malcolm reiterates his views as to the nature of shock and the conditions of the blood vessels during shock He holds that the vessels, and especially the peripheral vessels, are tensely contracted and that the blood is forced rather than drawn into the central parts of the body He is of the opinion also that adrenalin administered for shock can be beneficial only at considerable risk and that saline injections are useful and free from danger only during recovery from shock He prefers injections into the cellular tissue to intravenous injections, because if the fluid does not find its way into the vessels from the cellular tissue an attempt to force it into a vein is likely to prove harmful as well as futile. He regards the usefulness of injections with a view to increasing the bulk of the blood as very limited in cases of uncomplicated shock The most important treatment, in his opinion, is preventive Everything possible should be done to maintain a flow of blood to the surface and to the head, and to keep the patient alive by warmth, by the administration of strychnin and of vasodilators, and by mechanical means The surgeon must reduce the traumatism by getting over the operation quickly

10 **Vaccine Cure of Infective Endocarditis**—In the case reported by the authors inoculations were regulated by the examination of the opsonic power of the patient's serum

11 **Excision of Knee**—Groves describes a method of fixation of the bones following excision of the knee which he had used successfully in a number of cases Two rods are passed horizontally through the femur and the tibia about two inches in each case from the line of section Each rod is one eighth of an inch in diameter and six inches long The projecting ends are then drawn together by two vertical rods provided with screw threads and nuts These can very quickly be tightened up by a box spanner When the apparatus is in position and firmly screwed up the bones are immovably fixed The final tightening of the screw nuts can be done after all the stitches are put in and the leg is on a splint and the two surfaces of bone can be securely pressed together so that the occurrence of a fibrous zone between them is impossible Each of the transfixing rods has a point and screw thread at one end and an eye one eighth of an inch in diameter at the other The lateral rods are similarly made Each transfixing rod has one connecting rod passing through its eye and its point passes through the eye of the opposite connecting rod

Groves makes the following claims for this operation 1,

It fixes the bones together more firmly and more rigidly than any other method because the fixation acts on the dense bone of the shaft and not on the cancellous tissue, 2, the bones are transfixed and held at points well away from the diseased area, 3, the final fixation and tightening can be effected after the wound is sewn up and the leg is on a splint, 4, it saves the patient a great deal of pain in the dressings, and, 5, it leaves in the bones no foreign bodies which may have to be removed by a subsequent operation

12 **Affections of Pancreas**—In this paper Phillips discusses the clinical history and treatment of acute pancreatic catarrh

14 **Cellulitis of Spermatic Cord**—Under this title Madden refers to a series of cases the symptoms in which closely resembled those of strangulated hernia, but which on operative investigation proved to be cases of cellulitis of the spermatic cord In two of the cases the patients stated that they had suffered for many years from hernia In both instances Madden was able to demonstrate an empty hernial sac in the center of the scrotum and inflamed tissues encountered

Journal of Tropical Medicine and Hygiene, London.

February 15

16 Tropical Forms of Pityriasis Versicolor A. Castellani
17 *Tropical Clothing L. W Sambon
18 Hemoglobinuric Fever with Long Latent Period P W Bassett Smith

17 **Tropical Clothing**—Sambon claims that the white man in the tropics should wear black, red, or orange-colored clothing because these are the colors which exclude the short rays He states that the use of white clothing has been adopted in imitation of native custom, but in doing so the white man overlooked the all important fact that the native is already fully protected by a natural armor of pigment which is impervious to the harmful actinic rays He asserts that the wearing of white outer garments and black, red or yellow underclothing, or the use of white garments lined with a cloth of appropriate color would no doubt be effectual, but the ideal for the white man in the tropics is a fabric that might at the same time exclude the actinic rays and reflect the heat rays, thus avoiding complexity of garments and much unnecessary weight

Medical Press and Circular, London.

February 6

19 Chronic Non suppurative Diseases of the Middle Ear M Yearsley
20 *Possible Danger in Exploratory Puncture of the Breast H Armstrong
21 Tuberculosis Dispensaries and the Co-ordination of Measures Against Tuberculosis R. W Philip
22 *Early Case of Leontiasis Ossea S H Law

February 13

23 *Treatment of Non Malignant Gastric Ulcer C Ball
24 Cerebrospinal Meningitis. W Elder
25 Acute Meningococcal Cerebrospinal Meningitis in Young Children J Thomson and S McDonald
26 Infant Feeding R Hutchison
27 *Treatment of Peritonitis H W Carson

February 20

28 Hydronephrosis with Notes of an Extreme Case W Alexander
29 *Acid Intoxication Following General Anesthesia. R. Campbell
30 Cerebrospinal Meningitis in Glasgow A K Chalmers
31 Eye and Ear Symptoms in Cerebrospinal Meningitis. C Shaw
32 *General Fetal Dropsy J Dunlop

20 **Exploratory Puncture of Chest**—Armstrong states that when he is positive of the directness of clinical diagnosis he does not hesitate to resort to puncture to confirm the diagnosis, but when he is doubtful, he resorts to the use of the needle with much trepidation In illustration of his statement he cites one case in which the use of the needle nearly caused the death of the patient The case proved to be one of chronic interstitial pneumonia possibly infected with tubercle, and the needle entered the lung He advises fortifying the patient by previous administration of stimulants performing the operation with the patient in the recumbent position and not plunging the needle too far in

22 **Leontiasis Ossea**—Law's patient was a boy only 12 years old He seemed to be in goood health and was well developed His only complaint was nasal obstruction On examination there was found a hard, bilateral growth in the infraorbital region, extending up in such a way as to cause exophthalmos and the nasal obstruction The Roentgen ray showed great thickening of all the bones of the cranial vault

23 **Treatment of Non-Malignant Gastric Ulcer**—Ball urges that in all cases of uncomplicated gastric ulcer in which a reasonable trial of treatment by rest and limited diet is not followed by marked improvement, gastroenterostomy should be performed In one of his cases there was a curious sequence to gastroenterostomy The portion of jejunum corresponding to the stomach anastomosis became dilated to four times its normal size, forming a sort of secondary stomach, and produced obstruction by kinking of the distal portion of intestine there was also continuous vomiting A lateral anastomosis below the dilatation relieved the symptoms, this was done a year ago and the patient at present remains in good health

27 **Treatment of Peritonitis**—Carson discusses the treatment of peritonitis under three heads (1) preoperative, (2) operative, and (3) postoperative Under the first head he discusses the use of turpentine enemas and placing the patient in such a position that the exudation will tend to gravitate toward the pelvis The operative procedure should include elimination of the primary cause, avoidance of manipulation breaking down adhesions, flushing, etc., and continuous drainage In the after treatment the aim should be to promote leucocytosis, to prevent further infection of the peritoneum, and to eliminate the toxic products in the infecting organisms before they can become absorbed into the circulation

29 **Acid Intoxication Following General Anesthesia**—Campbell is convinced that delayed chloroform poisoning is a dread reality, and he reports three cases that terminated fatally 50 hours, 38 hours and 30 hours respectively after operation That heredity may enter into the consideration of the causes of this condition may be assumed from the fact that in one of Campbell's cases he was informed that two other children of the same family had died in much the same way, but without any anesthetic having been given In another case of unexpected death he discovered that a brother of the patient had died in exactly the same way the day after being operated on

32 **General Fetal Dropsy**—In the case reported by Dunlop miscarriage took place during the sixth month The fetus resembled *a case of acute Bright's disease with general anasarca*, with pitting on pressure There was no desquamation and no emphysema of the skin, but a true dropsy The father was well but the mother had had influenza while she was pregnant She was in good health both before and after this attack

Clinical Journal, London.

February 6

33 *Abscess of the Liver H Mackenzie
34 *Arrest of Cancerous Growths W B Clarke
35 Treatment of Surgical Emergencies A Baldwin
36 Surgery of the Rectum F C Wallis

February 13

37 Pneumonia W H White
38 Certifiability C A Mercier

February 20

39 Essentials of a Diagnosis C B Lockwood
40 Diagnosis of Pregnancy I C McCann

33 **Abscess of Liver**—Mackenzie reports three cases, in one of which the diagnosis was comparatively easy, while in the other two cases it was somewhat difficult the symptoms simulating in one instance acute pneumonia He says that if a sufficient number of symptoms and visible signs are present an exploratory operation should be done

34 **Arrest of Cancerous Growths.**—Clarke reports two interesting cases of malignant growth One of the patients had a tumor of the intestine which had been arrested for ten years The tumor had not been removed Microscopic examination of a lymph gland showed undoubted evidence of carcinoma The second patient had carcinoma of the breast A radical operation was done but the growth recurred and two years afterward the patient begged that something be done to relieve her pain There were a large number of secondary growths on the side of the chest but no evidence of visceral involvement A double oophorectomy was done Within 48 hours the pain ceased and the thickened and edematous skin began to shrivel Nearly all the secondary nodules disappeared In this case the tumor has been arrested seven years

Presse Médicale, Paris

41 (XV No 5 pp 33-40) *Dietetics for the Aged (La loi de 1905 et l'alimentation rationelle du vieillard) L. Landouzy
42 *Possible Spread of Typhoid Fever by Urine (Analyses d'urines typhiques et propagation etc.) M. P. Remlinger
43 *Choice of Hot Beverage in Stomach Affections (Choix d'une boisson chaude) L. Meunier
44 (No 6 pp 41-48) Prodromal Pseudo-neurasthenia in Dementia Precox (Pseudo-neurasthénie etc.) Pascal
45 Disinfection of Sputum (Desinfection des crachats) J. P. Langlois

41 Dietetics for the Aged.—Landouzy discusses the subject from the standpoint of state assistance of the aged poor, a law to this effect went into force in France with the current year. This grants a pension to the aged, the infirm and the incurables, ranging from $2 to $6 a month, to be paid at their homes if they are not already beneficiaries of institutional care. Wise expenditure of this sum is necessary, he says, to produce the 1,950 calories needed by the average old man or woman weighing about 140 pounds. Most of these calories are required to maintain the body heat, muscular energy and the like being reduced to the minimum. He gives a number of menus costing about 10 cents a day, suitable for the aged, emphasizing that fresh meat is costly and is less nourishing than a diet of bread with a little ham or bacon or coffee, grapes or raisins, figs or chocolate, vegetables, chestnuts, rice and a little cheese. For beverages he suggests milk, coffee and a glass of native wine at dinner. An inexpensive, nourishing soup can be made from vegetables and bacon fat. He declares that on a diet of this kind the aged will thrive, as it is of easy digestion, appetizing and non constipating.

42 Analysis of Typhoid Urine.—Remlinger suggests that special air tight vials should be provided for receptacles for urine that is to be analyzed, and that all persons having anything to do with the transportation or the analysis of the urine should take special precautions against contamination of their hands or articles in the environment. Achard has recently reported the infection of an attendant whose duty it was to carry the urine of typhoid patients to the laboratory for examination and of the interne who made the examination.

43 A Hot Beverage for Persons with Stomach Affections.—Meunier thinks that it is possible to derive direct therapeutic benefit from the hot drink taken with the meals by adding to the hot water some substance that will aid digestion and evacuation of the stomach. Considerable experience has shown remarkable efficacy in this respect of an infusion of malt, retaining unimpaired the diastase or digestive ferment that forms around the germinating bud of the grain of barley. In making beer, the grain is treated with boiling water which destroys the diastase. He recommends an infusion of the malt made with water just below the boiling point. The beverage is prepared like French coffee, a tablespoonful of the malt is ground in a coffee mill and a teacupful of hot water is poured over it. The diastase in this refreshing drink supplements, he asserts, the action of the diastase in the saliva, thus aiding in the digestion of starch.

Semaine Médicale, Paris

46 (XXVII No 6 pp 61-72) Posthemiplegic Contractures (Contractures post hémiplégiques pseudo précoces) L. Bard
47 New Method of Local Anesthesia in Extraction of Teeth (Anesthésie diploique) R. Nogué

Monatsschrift f. Geb. und Gynäkologie, Berlin.

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48 (XXV No 1 pp 1-148) *Experiences with Ruptured Extrauterine Pregnancy with Hemorrhage into the Abdominal Cavity (Extrauterinschwangerschaft mit freiem Bluterguss in die Bauchhöhle) E. Haim and O. Lederer. Concluded in No. —
49 *Placenta Prævia at Schauta's Clinic. (Zur Statistics der Pp.) O. Bürger and R. Graf
50 Innervation of Uterus. (Innervation des Ut.) O. Roith
51 *Relations Between Gynecologic Affections and Neuroses. (Wie verhalten sich die gyn. Erkrankungen zu den Neurosen.) H. Sutter
52 (No 2 pp 149-290) *Laparotomy for Irreducible Backward Displacement of Gravid Uterus. (Was kann die Lap. bei irreponibl. Retroversio und Retroflexio uteri gravidi leisten.) O. Küstner
53 Uses of the Balloon as Obstetric Dilator. (Der zugfeste Ballon als geburtshilflicher Dilatator.) A. Mueller
54 Retroperitoneal Tumor. (Retroperit. Geschwulst.) W. Hannes
55 Epithelioid Tissue in Female Genital Apparatus. (Epithelioidgewebe im Genitalapparat des Weibes.) K. Olesko-Stroganova. Commenced in No. 1
56 *Carbon Dioxid Percentage in Blood of Umbilical Vein (Kohlensäuregehalt des Blutes in der Nabelschnurvene.) A. Pfeiffer. Commenced in No. 1

48 Ruptured Ectopic Pregnancy.—This communication from Lotheissen's clinic reviews the experiences with 27 cases of ruptured extrauterine pregnancy. Only four of the patients were primiparæ. In nine instances the rupture must have occurred at the time of the last menstrual period and the hemorrhage from it had been assumed by the patient to be the normal menses. The rupture occurred generally between the second and third month of the pregnancy, in six cases during the first month. The imbedding of the ovum in the tube makes the wall so thin at this point that rupture is liable to occur on the slightest provocation. A case is on record in which fatal hemorrhage followed gentle palpation by the physician. The rupture may occur without serious hemorrhage at the time. In one of the cases reported the patient was being prepared for operation, the pulse was good and there were no signs of collapse. While the field of operation was being disinfected, collapse suddenly occurred. The waxy pallor is the most striking symptom in a typical case of ruptured extrauterine pregnancy with profuse hemorrhage. The pallor in some cases had even a yellow tinge, although actual icterus was never observed in the clinic. The hemoglobin percentage dropped to 25 or 30 in most of the cases. The abdomen was usually painful on pressure all over the lower part, while meteorism and rigidity of the abdominal walls were minimal if present at all. Even with small amounts of escaping blood, zones of dulness were discovered in the lower part of the abdomen or over Poupart's ligament. Fluctuation was rarely observed, probably owing to the fact that blood is thicker than the fluid of effusions and transudations. In thirteen of the patients the pulse was over 120, in six between 100 and 120, and in the others below 100. No typical findings were discovered in the genital organs, although there was some escape of blood through the vagina at the time of the rupture in 16 cases. In a few cases the hemorrhage was so profuse that it suggested uterine abortion. Important for differentiation is a history of suddenly appearing, irregular genital hemorrhage with sudden pains, pallor, vertigo and tendency to faint, followed by a period free from symptoms.

49 Placenta Prævia at Schauta's Clinic.—Bürger and Graf state that 344 cases of placenta prævia were observed in the clinic between 1892 and 1905, in a total of 44,676 childbirths. This is an average of one to 130 births. Other German writers have reported an average ranging from the maximum of one in 58 to one in 1,532 (von Winkel, Saxony). The predisposition to placenta prævia seems to be enhanced by previous childbirths, especially when accompanied by certain complications, such as abortion, operative delivery, atony or manual or premature detachment of the placenta. About 45 per cent of the 350 children in question were born viable. Comparison with statistics from other clinics demonstrates, they think, the superiority of the treatment followed over that in vogue elsewhere. It consists in combined version without immediate extraction, with eventual dilatation of the still relatively narrow birth passages by means of the hysterurynter. About 28 per cent of the stillborn children had not reached term and 11.7 per cent were born before the eighth month. Nine others were in extreme maceration, one was syphilitic and another a monstrosity. The mortality in other clinics is given as ranging from 48.88 to 78 per cent.

51 Relations Between Gynecologic Affections and Neuroses.—Sutter's article is based on 315 cases of various gynecologic affections observed in public and private clinics at Munich. Neuroses were observed in 19.5 per cent of the 200 private patients and in 42.6 per cent of the 115 patients in the public clinic. The neuroses although less numerous, were more serious in the first group. A chart was kept for each patient recording the intelligence, memory, gait, attitude, motor paralyses, signs of motor excitability, sensitiveness to contact, to pressure, to pain, temperature, paresthesia, hyperalgesia of the skin, reflexes, bladder and rectal functions, the findings being noted both during and outside of the menstrual periods. The neuroses were observed with special frequency in the cases of inflammatory gynecologic processes and displacements. Sutter agrees with Windscheid that the acquired neuropathic disposition is a more frequent factor than the inherited in these

gynecologic neuroses He adds that masturbation in women has much more serious consequences than in men He thinks that a morbid nervous system is able to induce a gynecologic affection, even aside from the manifest affections due to masturbation, foreign bodies and exaggerated sexual desires Sutter's experience has been that myoma is rare among multiparæ. Chronic metritis and chronic atrophying parametritis are liable to be induced by psychic and physical overwork, with frequent commotion in the nervous system from infectious diseases chlorotic conditions or intoxications of various kinds The sympathetic system suffers especially under these conditions The absence of neuroses with cancer is a noticeable fact in his statistics The knowledge of the presence of cancer probably banishes the thought of all minor troubles, it is possible that carcinomatosis may prevent the development of a neurosis.

52 **Laparotomy for Irreducible Retrodisplacement of the Pregnant Uterus.**—Küstner reports a case of serious disturbances from fixation of the gravid uterus by adhesions fastening it low down in backward displacement The pregnancy was between the fourth and fifth month The abdomen was opened and the dense adhesions severed, after which the uterus was easily raised to its normal place No attempt at ventrofixation was made, but a Smith pessary was introduced and a catheter left in the bladder for a week The pregnancy continued to a normal termination Küstner declares that a laparotomy allows correction of the condition with the least possible injury to the bladder "The bladder is everything, the uterus nothing, in backward displacement of the gravid uterus," Pinard used to say, and a laparotomy allows better oversight of the bladder and adhesions in such cases Küstner adds that the incision should begin above the umbilicus and should not extend so far down as the space in front of the bladder The latter organ is thus left in peace while the uterus is being mobilized Instead of attempting any operation on the bladder, or inducing abortion in cases of the kind with threatening symptoms, the possibility of straightening the uterus through a laparotomy should be considered This should be done not so much in the interests of the pregnancy as to insure more favorable conditions for the functioning of the bladder In the after treatment the damaged bladder should receive first consideration

56 **Carbon Dioxid in the Blood of Vein of the Umbilical Cord.**—Rieländer tabulates the findings with 21 infants and gives an illustrated description of a simple apparatus which he has devised to determine the proportion of carbon dioxid in the blood He thinks that it may prove useful in the clinic generally Hitherto the physician has merely been able to guess at the proportion of carbon dioxid in the blood from the degree of cyanosis

Mitteilungen a. d Grenzgebieten der Med. u. Chir, Jena
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57 (Third supplementary No pp 1 1128 *Memorial to Mikulicz*) Johannes von Mikulicz Radecki W Kausch
58 *Operative Treatment of Extensive Prolapse of Rectum (Mastdarmvorfälle) O Samter
59 *Autoplastic Implantation of Bone (Knochen Implantation.) A Tietze.
60 *Experiences with Surgery of the Stomach (Magenchirurgie) E Martin
61 *Technic of Plastic Operation on the Nose (Nasenplastik.) A Henle
62 Otogenic Septic Cereral Infection (Vom Ohr ausgehende septische Allgemeininfektionen) W Kümmel
63 Emergency Hospital for Industrial Accidents. (Berufsgenossenschaftliche Unfallstation vom Roten Kreuz in Breslau) A Nicht
64 *Decapsulation in Chronic Nephritis (Chir Behandlung der chron Nephritis nach Edebohls.) M Zondek
65 *Typhoid Ulceration in Thyroid Gland. (Strumitis typhosa.) W Hübener
66 *Diagnosis and Treatment of Foreign Bodies in Upper Air Passages. (Fremdkörper etc. Bronchoskopie und Radioskopie) G Cottstein
67 *Absorbable Magnesium Button (Zur Darmknopffrage) Chlumsky
68 Hysteric Fever (Hysterische Fieber) W Kausch
69 Congenital High Shoulder (Schulterblatthochstand) Cracker
70 *Cancer of Large Intestine (Zur Klinik des Dickdarmkrebses) W Anschütz.
71 Post typhoid Abscess in Liver (Lebernbcess nach Typhus) P Lengemann
72 *Influence of Oxygen on the After-effects of Chloroform (Einfluss des Sauerstoffes auf die Nachwirkungen des Chloroforms) Id
73 *Roentgen Treatment of Stiff Joints (Röntgenbehandlung versteifter Gelenke) E. Moser
74 Acute Dilatation and Excessive Secretion of Stump of Stomach after Resection for Carcinoma (Akute Dilatation und Saftfluss nach Resektion etc.) Heile.
75 Abnormally Short Fingers or Toes. (Brachydaktylie) A Vachol
76 Intestinal Incarceration Cured by Laparotomy (Innere Einklemmung etc.) V E Mertens
77 *Contusion of the Epiphyseal Cartilage of the Head of the Femur and its Consequences (Kontusion der Knorpelfuge des Schenkelkopfes und ihre Folgezustände Coxa vara Coxitis deformans) G Schmidt.
78 *Experimental Surgery of Lungs and Pleura. (Lungen und Pleurachirurgie.) M Tiegel
79 Method for Exact Measurement of the Spine in Various Lesions (Messung und Aufzeichnung der Wirbelsäule) K Ludloff.
80 *Connection Between Clinical Duration of Gastric Cancer and Operability (Chir Behandlung des Magencarcinoma.) A Hoffmann
81 Statistics of Mammary Carcinoma and Cures. (Mammacarc. u deren Heilung) E. Scheu
82 Hysterical Edema from Surgical Standpoint. (Hyst Oedem) C. Goebel
83 *Bloodless Operations on the Skull and Study of the Brain under Atmospheric Overpressure (Blutleere Op am Schädel unter Ueberdruck) F Sauerbruch
84 Surgery of Gastric Cancer (Magenresektionen 1891 1904 Mikuliczschen Klinik) M Makkas
85 Bullet Wounds. (Schussverletzungen Mikuliczschen Klinik) Stappenbeck.
86 Contusions of the Intestines (Zur Pathologie und Klinik der Darmkontusionen) H Bucholz.

58 **Extensive Prolapse of the Rectum.**—Samter reports a dozen cases with the ultimate outcome of operative treatment Recurrence was not observed in any instance The various conditions presented by the different patients compelled strict individualization in the operative procedures, combining and modifying different technics, as he relates in detail

59 **Autoplastic Implantation of Bone.**—Tietze relates good results obtained by transplantation of a piece of bone in order to remedy serious defects in the forearm His experience with the method in the foot has not been satisfactory but for the hand it has given excellent results The first patient was a woman of 53, the first phalanx of the left great toe was implanted in the defect left after resection of the lower end of the radius for sarcoma The head of the phalanx was cut off, and it was implanted with the cartilage end toward the carpus and the raw end toward the cut surface of the radius Roentgen pictures were taken every month, and by the end of the year the bones were seen to be solidly united A small recurrence of the tumor was removed two years later and also a nodule found on the back of the hand Since their removal the patient has been in excellent health and she is still an accomplished pianist The second patient was a man of 50, a piece from the right tibia, about 5 or 6 cm long was implanted in the defect in the left ulna after resection of a periosteal sarcoma The bones are now solidly united The third patient was a housemaid of 21 The peripheral end of the second metacarpus of the left hand had been destroyed by a tuberculous process After resection the defect was filled with a piece taken from the fourth metatarsus of the left foot It fitted so perfectly in the defect that under the Roentgen rays it looked as if the original bone had been merely fractured transversely

60 **Experiences with Operations on the Stomach.**—Martin reviews his experiences during the last eight years with operations on the stomach a total of 72 operations on 61 patients In cancer whenever he is sure that everything morbid can be removed, he performs a radical operation, but not otherwise He regards jejunostomy as a very promising operation for ulcer, but offering little prospects of benefit in case of cancer He discusses the indications, technic and after results

61 **Plastic Operations on the Nose.**—Henle has found that plastic operations with cartilage are free from the disadvantages of bone grafting He relates the particulars of two cases in which the nose was restored by making a frame work out of one or two pieces cut from the costal cartilage In one case the nose was congenitally deformed in the other the nose had been shot away The cosmetic results attained have remained permanent during the years since cartilage not long ago replaced bone tissue or paraffin

64 **Decapsulation of the Kidney in Chronic Nephritis.**—Zondek reiterates that experimental research and clinical experience are confirming the value and practicability of Edebohls method of decapsulation in chronic nephritis and the

kidneys The lesions are irreparable, but the patient can live many years after their first appearance, while decapsulation is by no means a harmless or justifiable intervention under these circumstances

65 Typhoid Strumitis.—In Hübener's case the typhoid infection dated from 16 years before, but evacuation of the abscess in the thyroid gland revealed the presence of typhoid bacilli in pure cultures He reviews 119 articles from the literature bearing on the metastases of typhoid infection

66 Foreign Bodies in the Upper Air Passages.—About 164 pages are devoted to the experiences at Mikulicz's clinic with foreign bodies in the upper air passages, 15 cases in all, and a summary of 137 cases published by others Immense progress has been realized by the introduction of bronchoscopy

67 Button for Anastomosis of Hollow Viscera.—Chlumsky gives a historical sketch of the subject, with 46 illustrations, and commends buttons made on the pattern of the Murphy button, but from absorbable material Independently of Payr, he found that magnesium is an excellent material for the purpose, and now uses an exact copy of the Murphy button with the exception of the spiral spring and plate, which can be safely omitted, as the magnesium button is completely absorbed in time It can be boiled, and it keeps well, while it is simple, cheap and easily introduced. In dogs, the button still holds by the end of a week, and is not completely absorbed until after from two to four weeks It might be possible, he thinks, to hasten absorption by adding some chemical to the magnesium, possibly hydrochloric acid This would tend also to prevent another disadvantage of these magnesium buttons, namely, that sharp edged splinters are liable to cleave off His clinical experience with these buttons has been eminently satisfactory In one case the button was passed in the stool at the end of a week In another no trace of the button could be discovered with the Roentgen rays by the twelfth day He gave the patients dilute hydrochloric acid after the ninth day (4 or 5 drops in a glass of water)

70 Cancer of Large Intestine.—Anschütz comments on the good results obtained by radical operation in cancer of the large intestine He ascribes them to the lesser malignancy of cancer at this point and to the fact that with no other organ can the tumor and the glands be removed so radically as in these cases Of 138 patients operated on at Mikulicz's clinic—1891 1906—91 were men Nearly half the cases were inoperable when first seen He regards the finding of a stiff loop of the intestine as the most positive indication for operative interference, even when no tumor can be palpated It indicates obstruction and increased peristalsis in case of carcinoma of the colon, this sign was more or less pronounced in 60 cases If recurrence is not observed in a year and a half, the prospects for a permanent cure are good Some of the patients are still alive after 13 10, 9 and 8 years after a single operation, and 14 out of 25 treated by an operation in three sittings Fully 50 per cent of the patients were permanently cured by surgical intervention, 10 to 15 per cent did not survive the effects of the operation

72 Influence of Oxygen on After-Effects of Chloroform.—Lengemann describes experimental research which demonstrates, he thinks, that chloroform given with oxygen is much less toxic than when given with air But even at the best, enough toxicity is left to compel caution He considers the ideal general anesthesia to date to be that induced with ether, possibly preceded by morphin, with only enough chloroform, in small amounts, to render the anesthesia more profound

73 Roentgen Treatment of Stiff Joints.—Among the cases reported by Moser is that of a man of 52 who, since the age of 24, had suffered from pains and stiffness in the hip, probably the relics of an osteomyelitic process in the neck of the femur He had tried all kinds of treatment—baths massage, electricity Swedish movements—but without results, the latter measures even increasing the pain He walked with a cane limping very much Under Roentgen treatment the joint became less painful and he could use it with greater ease The improvement continued progressively after suspension of the Roentgen exposures About a dozen exposures of from five to ten minutes each were made in the course of three or four months, with a hard tube, at a distance of from 15 to 30 cm After each exposure the patient lay down for a time No benefit from Roentgen treatment was obtained in the cases of deforming arthritis, and in another case the exposures induced pain in a previously painless joint The joints did not regain normal mobility in any instance, but it is a great gain to a patient to be able to raise the hand even to the head, when previously it could not be raised more than a few inches, or to be able to sit down and get up with ease instead of the act being accompanied by great pain and only accomplished with difficulty, as before the treatment in one of the cases

77 Contusion of the Epiphyseal Cartilage of the Head of the Femur.—Schmidt here relates three instances of severe coxitis or coxa vara developing years after an apparently insignificant accident to the hip, injuring the epiphyseal cartilage and thus interfering later with the nutrition of the head of the femur It is important for the diagnosis that an interval free from symptoms follows the primary injury On suspicion of such an injury the physician should be careful not to render conditions worse by rough measures at reduction in case of dislocation Suspicion of crushing of the epiphyseal cartilage indicates rest in bed for several weeks with extension and, later, cautious attempts to use the limb in dressings, relieving pressure and correcting the position of the limb

78 Surgery of Lungs and Pleura.—Tiegel has performed numerous operations on the lungs and pleuræ of dogs in Sauerbruch's overpressure pneumatic cabinet, and states that it allows operations to be protracted for hours, with the pleural cavity opened, without the slightest signs of disturbance in the functions of lungs or heart, provided the anesthesia is thorough and profound He analyzes a number of fatal injuries of the lungs or pleura that have been published and points out that in some of them the trouble was manifestly due to what he calls distension pneumothorax (Spannungsthorax), and not to extravasation of blood as assumed at the time When the symptoms are due principally to the distension pneumothorax, his experience indicates that all trouble can be averted by puncturing the pneumothorax cavity and leaving a valve cannula in place until symptoms from this source have subsided He gives an illustration of a valve cannula which he has devised for the purpose, and which he has found very efficient in both experimental and clinical experience

80 Prospects of Operative Treatment of Cancer of the Stomach.—Hoffmann concludes his article with the remark that better prospects in regard to cancer of the stomach can not be expected in the line of improved technic, but only from earlier diagnosis Physicians and the public should be trained to recognize the condition earlier On an average 10.3 months elapse after the first symptoms before the surgeon sees the patient There is an unmistakable connection between the duration of the symptoms and the possibility of radical removal of the cancer and ultimate cure

83 Bloodless Operations on the Skull Under Increased Atmospheric Pressure.—Sauerbruch's overpressure pneumatic cabinet has been frequently mentioned in these columns, especially its advantages for allowing operative intervention on the lungs and pleura without fear of pneumothorax. He here relates experiences with operations on the skull in the overpressure cabinet. They allowed remarkable oversight of the physiologic conditions of the brain, especially in regard to compression of the brain and the conditions of the circulation through this organ Among the practical results of his research is his announcement that a sharp distinction should be made between local pressure and compression from the cerebrospinal fluid Measures which act only on the blood pressure, such as infusion, or have an influence merely on the filling of the veins in the skull, such as venesection, are of no use in local compression Trephining is the only measure indicated in case of local compression of the brain, especially extradural He advises trephining on suspicion of local compression even when signs of irritation and paralysis suggest trouble only in an entirely circumscribed region It is not necessary to wait for the characteristic "pulse of compression," change in the type of breathing, vomiting and loss of consciousness, before feeling

justified in operating Even slight disturbances in consciousness are an early symptom of compression and justify trephining before severer symptoms on the part of the medulla are observed. The trouble from local compression consists more in the pushing aside and compression of the brain matter than from the tension of the cerebrospinal fluid, and a large opening should be made, with permanent resection of the bone and corresponding dura Even when the compression is due to the cerebrospinal fluid his experiences suggest that trephining is more certain in its results than mere lumbar puncture, even if often repeated

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87 (LX Nos 5 6 pp 357 528) *Polycythemia with Enlargement of Spleen. (Erythrozytosis—Polyzythaemia rubra—megalosplenica) H. Senator
88 Changes in Liver Cells after Experimental Nephrectomy and Inanition. (Azidose.) M Mosse.
89 *Spasmodic Mydriasis in Valvular Disease. (' Springende Pupillen.) Géronne
90 Hemorrhagic Erythema Nodosum and its Relation to Purpura. (Erythema nodosum haemorrhagicum) Id.
91 Experimental Study of Appearance of Sugar in Nephritic Dropsy (Zucker im nephritischen Hydrops) Bibergeil
92 Elimination of Pathologic Coagulation modifying Albuminoids in the Urine in Nephritis (Eiweisskörper im Harn bei Nephritis) J Brodzki
93 *Experimental Study of Renal Dropsy (Nierenwassersucht.) Georgopulos
94 Id. Blanck
95 Hemolysis in Nephritis (Hämolyse bei Nephritis) E. J Leopold
96 Action of Salts on the Kidneys in Experiments on Animals (Einwirkung von Salzen auf die Nieren) Id.
97 *Proportion of Water in the Blood Serum in Cardiac and Renal Dropsy (Wassergehalt des Blutserums bei Herz und Nierenwassersucht.) H Strauss
98 (LXI Nos 1 2 pp 1 200) *Nature of Diabetes Insipidus. (Wesen des D insip) F Seller
99 *Defective Development of Arterial System (Hypoplasie des Arteriensystems) S v Ritook
100 *Cysticercus in the Fourth Ventricle (Cysticerken im vierten Ventrikel) A Stern
101 Dicrotic Pulse with Aortic Insufficiency W Janowski Id. A Nürnberg
102 Experimental Tests of Isotonic Mineral Waters (Prüfung isot Mineralwasser) P Bergell and L. Laband.
103 Fat in the Blood in Diabetes (Diabetische Lipämie) G Klemperer and H Umber
104 *Albumin Metabolism Dependent on Action of Nerves and Ferments (Lehre vom erhöhten Eiweissstoffwechsel) E Aronsohn

87 Polycythemia with Enlargement of Spleen.—Senator reports the results of study of the metabolism, especially of the gases, and of the blood in two cases of this affection He thinks that the evidence is in favor of increased production of red corpuscles from hyperfunctioning of the bone marrow Much light would be thrown on the affection if it could be determined that the enlargement of the spleen precedes the polycythemia The only measure that seemed to relieve his patients was spontaneous hemorrhage or venesection, and the benefit was only temporary

89 Spasmodic Dilatation of the Pupils with Existing Valvular Affection.—The patient was a woman of 47 with pronounced mitral insufficiency, stenosis and failing compensation The left pupil was dilated more than the right, although the reaction was undisturbed After reclining on the right side the right pupil sometimes became temporarily dilated Géronne assumes that the valvular affection was responsible for this anomalous mydriasis by intermediation of the sympathetic system, the cardiac ramifications of the nerve probably being involved in the valvular affection

93 Experimental Study of Renal Dropsy.—All the articles in this number of the *Zeitschrift* issue from Senator's laboratory This monograph by Georgopulos relates the findings in nephritis experimentally induced in lower animals with uranium or cantharidin He has demonstrated that there is no constant parallelism between the amount of chlorids eliminated through the kidney and the proportion of chlorids in the dropsical accumulations of water More water is retained in proportion, than chlorids thus lowering the chlorid content of the blood The retention of water is not dependent therefore on the retention of chlorids It depends rather on some primary disturbance in the water secreting capacity of the kidneys These findings are not corroborative of the salt theory in regard to renal dropsy but speak against it He adds that the pathologic findings in this experimental nephritis and the course of the affection apparently resembled those in human nephritis in every respect, and the conclusions based thereon can be applied also to man He agrees with Senator that toxic substances circulating in the blood injure the vessel walls and lead to transudation when there is an over accumulation of water in them from the disturbance in the water secreting faculty of the kidney These assumptions are reinforced by the fact that injection of nephrectomized rabbits—free from dropsy—with a small amount of blood serum from the rabbits with the experimental nephritis was always followed by extensive transudation of fluid into the abdominal cavity The results of these and other experiments suggest that copious ingestion of fluids has a favorable effect on the diseased kidneys so long as the diluting power of the kidney is unimpaired On the other hand it aids in increasing the dropsy if the water secreting faculty of the kidneys is impaired The retained water has a beneficial action however as it dilutes the toxic substances in the blood The rabbits that were not given much water died with symptoms of intoxication while none was observed with the rabbits which were given water freely It may be that the lower molecular concentration and the less frequent development of uremia in parenchymatous nephritis in contrast with interstitial nephritis is the result of the retention of water The elimination of water in case of contracted kidney generally proceeds normally while the secretion of the solid elements of the urine is much impaired Restriction of water, for fear of its effects on the heart and dropsy, under certain circumstances may prove directly harmful for the organism as a whole

97 Water Content of Blood Serum with Cardiac and Renal Dropsy.—Strauss has continued his study of the blood serum with a refractometer since his first publications on the subject three years ago and here announces a number of interesting findings Among them is the fact that in case of retention of water in consequence of kidney disease the retention of water is always preceded by a primary retention of salt This factor is missing in cardiac dropsy which is the primary result of failing compensation The changes in the blood serum are much more instructive than the results of research on the metabolism in case of renal or cardiac dropsy The findings by the refractometric method of investigation harmonize perfectly with the data learned otherwise It gives direct insight into the action of diuretic measures on hydremic and dropsical conditions The reduction of the proportion of water in the blood serum under measures to enhance diuresis can be accurately followed step by step with the refractometer He gives some concrete examples from his clinical experience, adding that he was the first to call attention to the nephrogenic retention of salt and the consequent therapeutic indications in case of renal dropsy He adds that the question of retention of salt has nothing to do with the treatment of impending or established uremia although when the uremia is associated with a tendency to dropsy the conditions for recovery are more favorable as the poisonous substances are diluted and can be removed by draining away the dropsical fluid

98 True Nature of Diabetes Insipidus.—Seiler concludes from his clinical and experimental experiences that diabetes insipidus is the result of an anomaly in kidney functioning which consists in the fact that the kidneys are no longer able to secrete urine of a normal concentration The concentration is always below normal If sufficient fluid is not ingested then the elements of the urine are retained and trouble follows To obtain sufficient fluid for the purpose Nature calls for increased intake of fluid by increased thirst and satisfying the thirst leads to the polyuria This may possibly be the cause also of the polyuria observed with contracted kidney It might be possible he suggests, to influence the diabetes favorably by diuretics to improve the secreting conditions in the kidneys

99 Hypoplasia of the Arterial System.—Pitood describes 17 cases in which the symptoms were observed which he explains by assuming defective development of the arterial system He has found in the literature records of 76 cases of hypoplasia of the arterial system The patients were all under 27 and they all exhibited extreme anemia resisting treatment and for which no other cause could be discovered Defective development

ment of other organs was also evident, such as a very small heart, or hyperplasia of the genital organs, or defective blood production, as in leukemia and hemophilia Early fatigue of youthful individuals with otherwise normal hearts, after comparatively slight physical exertion, is an important sign of the condition as also subnormal temperature, very slight fever in febrile affections, and cold hands or feet permanently or periodically Further symptoms are palpitations of the heart, amounting at times to actual angina pectoris, accompanying cardioptosis or following slight physical exertion, especially in individuals who are growing fast during puberty, hypertrophy of the left heart, if no other reason for it can be ascertained but without the jugular pulse, the radial pulse corresponding to the hypertrophy or presenting very small pulse waves, acute or rapidly developing cardiac insufficiency after comparatively slight physical exertion, and finally, low resisting powers in infectious diseases, especially the acute infections, on account of the early exhaustion of the heart The condition was diagnosed during life in 12 of the 73 cases Treatment can only be that of a valvular affection, with scrupulous avoidance of physical exertion even for persons apparently in good health

100 **Cysticercus in the Fourth Ventricle**—Stern relates the histories of four patients with cysticercus in the fourth ventricle, giving the postmortem findings and appending the details of 68 cases from the literature The diagnosis is based on the pronounced and generally very violent symptoms of general pressure in the brain, headache, vertigo and vomiting, with intervals of freedom from symptoms Pain and stiffness in the back of the neck, continuous vomiting and cerebellar ataxia point to an affection of the posterior cranial fossa, while choked disc, somnolence and slowing of the pulse show the increased intracranial pressure In some rare cases there are also focal symptoms, such as diabetes *respiratory disturbances*, cerebral and abducent paralysis The diagnosis is rendered certain by the Bruns sign, that is, the sudden onset of severe cerebral symptoms when the head is brusquely moved This sign was observed in a fourth of all the cases, it has been noticed also with tumors of the posterior cranial fossa The affection frequently terminates with sudden death In case of lumbar puncture, the sudden subsidence of the pressure after escape of a minimal amount of fluid is a sign of crowding in the posterior cranial fossa and is a warning against withdrawal of more fluid With the death of the cysticercus the symptoms may subside, but this has been only exceptionally observed. We do not know how long the cysticercus lives More favorable prospects are afforded by Oppenheim's discovery of calcified parasites in the brain in a case in which the patient had had no appreciable symptoms from their presence for years before his death In another case in his experience a patient with cortical epilepsy had hydatid cysts elsewhere and the epilepsy was assumed to be the result of the presence of the parasites in the brain The seizures finally ceased and he can now be regarded as cured In a case reported by Marchand a vesicle was found shriveled and others ruptured These findings suggest the possibility of a more favorable outcome than has been the rule hitherto Attempts have been made to treat the condition on the same lines as tapeworm, but without the slightest success Bruns and Henneberg believe that it might be possible to incise the vermiform process of the cerebellum and evacuate by puncture the cysticercus vesicle in the fourth ventricle in case the cysticercus is free This Bruns assumes to be the case when the patient becomes dizzy and falls when he moves his head brusquely He warns however against attempting the operation if the fluid in the ventricle is under great pressure for fear of sudden death The operation should be attempted only when the hydrocephalus is not very intense, as shown by the absence of headache The most characteristic sign of cysticercus in the fourth ventricle is the striking alternation between serious symptoms and periods of entire freedom from symptoms Lumbar puncture may be useful for diagnosis and treatment, as also puncture of the ventricle according to Neisser's technic, to relieve the internal hydrocephalus

104 **Albumin Metabolism.**—Aronsohn presents arguments to prove that the increased metabolism of albumin during fever depends on the action of the nerves and ferments The assumption of a toxic decomposition of albumin has no scientific basis The augmented albumin metabolism occurs only in case of fever or excessive nervous excitement, in cachexia, and also when the body cells are insufficiently supplied with carbohydrates and fat. During fever and nervous excitement the metabolism of albumin is increased by the increased innervation of the cells (irritation of the heat center) Cancer is not accompanied by increased metabolism except during febrile periods of cachexia In exophthalmic goiter, pernicious anemia and afebrile tuberculosis the albumin metabolism is not enhanced The increased elimination of nitrogen in case of phosphorus, *arsenic and chloroform intoxication* is due to the accompanying rise in temperature

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105 (XXX, No 4 pp 341-451) Hypophysis in Marmot During Hibernation and in Summer (Su l'ipofisi delle marmotte) A. Gemelli.

106 *Etiology of Bacterial Necrosis* (Necrosi batteriche) F Vanzetti

107 Extreme Hyperplasia of Thymus in an adult. (Enorme tumore del mediastino anteriore dovuto unicamente ad abnorme persistenza e forte iperplasia del timo) G Tarozzi

108 Changes in Uterine Epithelium During Gestation in Certain Animals (Epitelio uterino durante la gravidanza) A Carraro

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them A selection from these volumes will be made for review as dictated by their merits or in the interest of our readers

MEDICAL DIAGNOSIS A Manual of Clinical Methods for Practitioners and Students Fifth Edition, Enlarged and Revised, by J J Graham Brown M.D F R C P E F R S E., Assistant Physician Royal Infirmary of Edinburgh and W T Ritchie M.D., F R C.I E F R.S E., Clinical Assistant Pathologist, Royal Infirmary of Edinburgh with 200 Illustrations Cloth Pp 508 Price $3 00 New York Imperial Publishing Company, Edinburgh and London William Green & Sons, 1907

TEXT BOOK OF THE PRACTICE OF MEDICINE For Students and Practitioners By Hobart Amory Hare M.D B Sc. Professor of Therapeutics in Jefferson Medical College, Philadelphia Second Edition Revised and Enlarged with 131 Engravings. Cloth Pp 1132 Price $5 00 net. Philadelphia Lea Bros & Co, 1907

TUMORS INNOCENT AND MALIGNANT Their Clinical Character and Appropriate Treatment. By J Bland Sutton F R.C S Surgeon to and Member of the Cancer Investigation Committee of the Middlesex Hospital Fourth Edition with 355 Engravings. Cloth Pp 675 Price, $4 50 net. Chicago W T Keener & Co, 1907

TEXT BOOK OF OPHTHALMIC OPERATIONS By Harold Grimsdale M.D F R C S Ophthalmic Surgeon to St. George's Hospital, and Elmore Brewerton F R.C S Ophthalmic Surgeon to the Metropolitan Hospital Cloth Pp 349 Price, $5 00 net. Chicago W T Keener & Co 1907

LIST of the Fellows Members, Extra licentiates and Licentiates of the Royal College of Physicians, London, and of the Holders of the Diploma in Public Health. Granted Jointly by the College of Physicians and Surgeons Paper Pp 326 1907

FOURTH ANNUAL REPORT OF THE SUPERINTENDENT OF THE BUREAU OF GOVERNMENT LABORATORIES for the Year Ending Aug 31 1905 By Paul C Freer Superintendent of Government Laboratories Paper Pp 24. Manila Bureau of Printing 1906

ALCOHOL The Sanction for Its Use, Scientifically Established and Popularly Expounded by a Physiologist Translated from the German of Dr J Starke Cloth Pp 317 New York and London G P Putnam's Sons 1907

EYE INJURIES AND THEIR TREATMENT By A. Maitland Ramsey M D Fellow of the Faculty of Physicians and Surgeons Glasgow Illustrated. Cloth Pp 210 Price $6 00 New York The Macmillan Company 1907

FIFTY FIRST ANNUAL REPORT on the Births Marriages and Deaths in the City of Providence for the Year 1905 By Charles V Chapin M D City Registrar Paper Pp 239 Providence Snow & Farnham 1906

ENCYCLOPEDIA AND DICTIONARY OF MEDICINE AND SURGERY vol III From Ea to Gu Leather Pp 535 Price $5 00 Edinburgh William Green & Sons Chicago W T Keener & Co American agents 1907

JOHNS HOPKINS HOSPITAL REPORTS Volume XIII on Studies in Urological Surgery and volume XIV on Studies on Hypertrophy and Cancer of the Prostate Paper Baltimore Johns Hopkins Press 1906 (

FIFTH ANNUAL REPORT of the Director of the Bureau of Science By Paul C Freer Director of the Bureau of Science for the Year Ending Aug 1 1906 Paper Pp 24 Manila Bureau of Printing 1906

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Original Articles

CHANGES IN THE LYMPHOID TISSUE IN CERTAIN OF THE INFECTIOUS DISEASES *

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BOSTON

In 1898, in a paper read before the Association of American Physicians, I called attention to a form of nephritis associated with acute infections, which, although recognized and described, did not seem to me to have been accorded the attention it deserved This, the acute interstitial non-suppurative nephritis, is characterized by the appearance of foci of cellular infiltration in the interstitial tissue of the kidney In some cases the extent of the cellular infiltration is so great that marked macroscopic changes are produced in the organ In these cases the kidney is greatly enlarged, the capsule is distended, thin and often separates spontaneously on section In children the fetal markings are less distinct and often obliterated The suface is pale, of a grayish opaque color, somewhat resembling the amyloid kidney, mottled with irregular more hyperemic areas The stellate veins of the surface are injected and often show punctate ecchymoses around them The surface may be irregular, due to the projection of small irregular nodules which are more opaque than the surrounding tissue On section of such kidneys the normal markings of the cortex are obliterated and the contrast between pyramids and cortex is less distinct. The increase in size is principally due to swelling of the cortex, which may be three or more times thicker than normal The general color of the cut surface is grayish and opaque with areas of injection and scattered ecchymoses Corresponding to the elevated areas on the surface there are often areas more opaque which extend in lines from the pyramids to the cortex The tissue is soft, lax and easily broken, it is moist and an opaque milky fluid may be pressed out or flows spontaneously from the cut surface The weight of the kidneys may be enormously increased In one case of diphtheria and measles in a child aged 2 years, the combined weight of the kidneys was 480 grams In another child with scarlet fever, aged 8 years, the kidneys weighed 400 grams I have found such extreme cases only in children dying of scarlet fever or diphtheria In the majority of cases the enlargement is but slight and there may be no macroscopic evidence of the condition

Microscopic examination shows a cellular infiltration of the interstitial tissue usually accompanied by accumulations of similar cells in the veins and capillaries The cells have a tendency to accumulate in foci which are found more often than elsewhere at the base of the pyramids and beneath the capsule The cells were regarded as lymphoid in character and of the type of the plasma cells Since 1898 in all routine examinations of tissue the presence of these cells in the tissues and their origin have been studied The interstitial cell accumulations are most frequent in the kidney, but are not confined to this organ Next to the kidney they are most frequently found in the adrenal glands and they are occasionally found in the pancreas and in the lungs They are most common in the organs of children, and the marked cases with great enlargement of the kidneys are only found in children In the kidneys in smallpox it is a common condition, but I have never found such extreme degrees as to lead to macroscopic changes I have been struck with the frequency of the condition in the kidneys of mice In a large number of autopsies on mice made by Dr Tyzzer in the course of his carcinoma work such interstitial foci were found in about one-fifth of the cases

As a routine the tissues were hardened in Zenker's fluid and thin paraffin sections were stained in methylene blue and eosin For certain purposes both Mallory's connective tissue stain and the phosphotungstate hematoxylin were used, but the descriptions are based on the methylene and eosin stain Sections were taken from the outer edges of the pieces of tissue where the hardening agents had fully penetrated There is great variation in the character of these cells, but it is possible to divide them into three classes

1 Small lymphoid cells of the usual type, with a nucleus rich in chromatin which is arranged peripherally with projections into the interior and a variable amount of pale cytoplasm The nuclei vary little in size and are from 3 to 5 microns in diameter Most of the cells give the appearance of free nuclei, but usually in cells lying separate the faint irregular outline of the cytoplasm can be distinguished outside of the nucleus No structure and no granulation can be distinguished in the cytoplasm It usually stains a faint lilac color with the methylene blue and eosin

2 The most numerous cells are large cells with a rather vesicular nucleus They vary greatly in size being from 6 to 15 microns in diameter The largest I have seen was 18 microns, the average is about 9 The cell outline is usually round it may be irregular from mutual pressure Occasionally cells are found apparently in active ameboid motion with long, usually blunt cytoplasmic projections The cytoplasm stains a pale blue and is non-granular in the methylene blue and eosin stain Intense stain with phosphotungstate hematoxylin brings out a very fine distinct granulation in many of the cells Occasionally faint vacuoles can be distinguished, usually at the periphery In the best preparations centrosomes can be seen often in pairs The nucleus is relatively large It varies in size from 5 to 8 microns, the average being about 6 It is round and usually placed eccentrically It contains a few coarse chromatin There is a clear nucleolar body

* Lecture delivered before the Harvey Society Feb 23 1907

as a rim of chromatin with slight projecting masses From these masses filaments extend into the nucleus and often end in large irregular masses of chromatin which usually stain less intensely than that in the periphery An intranuclear network apart from the chromatin can not be distinguished In some cases these cells form the majority

3 The third sort of cells, between which and the cells just described there are transitions, correspond to the plasma cells These show considerable variation in size, the cytoplasm stains intensely with methylene blue and with most other nuclear stains The nucleus is relatively small, always placed peripherally, its edge often in line with the edge of the cell, the chromatin is abundant and placed around the periphery The nucleus somewhat resembles that of the small lymphoid cell The cytoplasm is non-granular and alongside of the nucleus is a clear crescentic-shaped area in which the material which gives to the general cytoplasm its characteristic stain is absent With the methylene blue and eosin combination this area stains faintly with eosin The cytoplasm seems to be of firm consistency, the cells are round or oval and tend to retain this shape under conditions of mutual pressure In addition to these, which are the characteristic cells, there are variable numbers of eosinophile and mast cells There are also, particularly in the more advanced cases, numbers of large cells with vesicular nuclei and vacuolated protoplasm slightly staining with eosin which are phagocytic for the lymphoid cells and often contain one or several of these enclosed in vacuoles

These same cells of the lymphoid type are contained in the vessels and are most numerous in the straight veins of the pyramids I have found numerous cases in which they were confined to these vessels and absent in the interstitial tissue There is a certain difference in that the typical plasma cells are relatively much more numerous in the tissues than in the vessels When present in the pyramidal vessels in large numbers the cells may also be found in the capillaries of the cortex I have rarely found them in the glomerular vessels The pyramidal vessels containing the cells are dilated, and the cells are loosely contained in them or closely packed I have never found anything approaching the mural arrangement of polynuclear leucocytes in the vessels of an inflamed area Similar cells are occasionally seen in the blood contained in sections of arteries and veins, but never in considerable numbers Numerous nuclear figures are found in the cells, both those within the vessels and in the interstitial tissue. *Nuclear division* is accompanied by peculiar changes in the cell cytoplasm The cytoplasm becomes filled with basophilic granules, and in the tissue a cloud of such granules is often seen around the cell as though cast off in the act of division

All of these cells are ameboid, the small lymphocyte probably the least so I have not infrequently seen them in the act of emigration and in the rapidly hardened tissues the forms assumed by the free cells can be interpreted only in this way In the kidneys more or less degeneration is usually associated with the presence of the foreign cells and in the most marked cases their presence in such immense numbers in itself produces disorganization of the tissue I have not been able to regard them, however, either in the kidneys or in other tissues as merely a reaction to injury In the kidneys of mice there is frequently an infection with *Klassiella muris* but I have not been able to see any local relation between the various forms of this organism and the presence of the cells In the adrenals particularly they may be found in foci in which the tissue appears perfectly normal The only place I have found them in which their presence is definitely associated with parenchymatous injury is in the interstitial tissue about the focal lesions of the testicle in smallpox

It is certain that these cells can only reach the tissues from the blood There are no local cells which can give rise to them, and their presence in the vessels and their emigration make their blood origin evident. The abundance of nuclear figures in the cells both within and without the vessels shows that when brought to the tissues their number is rapidly increased by proliferation I have been at a loss to account for their presence in the kidneys in such large numbers. In the case of accumulations of polynuclear leucocytes in vessels and in tissues we are warranted in assuming a positive chemotaxis exerted on the cells within the vessels by the single or combined action of parasites and injured tissue In the interstitial foci we can exclude any local effect of parasites and, although there is always in these cases some degeneration, there seems to be no relation between the locality and extent of the degeneration and the presence of the cells I was at one time inclined to regard their accumulation as mechanical There must be slow flow and low pressure of blood in the venous groups of the pyramids, where these cells principally accumulate, owing to the length, the abundance and large size of the vessels, and the further fact that the entry of blood into them is preceded by a double capillary circulation This would tend to cause foreign substances in the blood, and these cells are foreign to the normal blood, to accumulate here In the kidney in a case of pernicious malarial fever with great numbers of parasites in the blood the principal intravascular accumulations of the parasites were in these vessels But such a mechanical theory will not explain their accumulation in other vessels of the kidney nor in other organs It seems to me that we must assume the action of a positive chemotaxis coming from the tissues and exerted on these cells alone There are no polynuclear leucocytes in the vessels with them, except the few which might be found in the amount of blood, nor are they present in the tissues In all of the cases in which the cells appear we have evidence of the diffused action of injurious soluble substances and it is possible the substances themselves or products formed from their action on cells may exert a local influence Some support is lent to the mechanical theory by the presence of these cells in comparatively large numbers in the liver capillaries

But little attention has been paid by those who examine blood smears to the presence of these cells Cell differentiation by this method is based on the presence in the cell cytoplasm of granules which take a specific stain with certain dyes Few methods of work have been given which have been of more importance in increasing knowledge than this method of Ehrlich The essential principles of leucocyte differentiation and origin which he deduced from study of the blood and marrow by the method still stand The method, however, has decided limitations when it comes to the differentiation of cells which have no specific granulation For the differentiation of such cells we must depend on size of cell and nucleus and structure, character and staining of cytoplasm, distribution and amount of chromatin in nucleus, etc There is always difficulty in the classification of single cells, as is shown by the perennial warfare which is waged concerning the differentiation and

origin of the cells which appear in injured tissues In the study of tissues we take into account more the relations of cells in the formation of the tissue than their characteristics as single cells Few cells seem more characteristic than the liver cells, and yet we may be very uncertain in the recognition of a single liver cell separated from its organic connection The cells in question have generally been grouped with the mononuclear cells of the blood In the very careful study of the blood of smallpox by Brinckerhoff, Magrath and Bancroft no attempt was made to differentiate the varieties of mononuclear cells The interstitial cells seem to me to correspond best with the cells described by Turk under the name of irritation cells He regards these cells as coming from the marrow and representing a differentiation of the marrow cell in a direction opposed to the normal differentiation into the polynuclear leucocyte He describes them as uninuclear, non-granular cells whose size varies They resemble the small and medium sized lymphoid cells of the marrow, but are distinguished from these by the small relative size of the nucleus The nucleus contains abundant chromatin, is sharply circumscribed, has definite structure and rarely shows nucleoli It is eccentrically placed in the cytoplasm The protoplasm is compact and stains intensely with methylene blue, often more deeply than the nucleus He found these cells in the blood in long-continued leucocytosis or in the cachexias of anemia, they appearing in the same conditions in which a few myelocytes and erythroblasts become washed into the blood The irritative cells of Turk have received much more attention at the hands of French than of German authors and have received special mention in the examination of blood in smallpox

For the origin of these cells we must turn to the lymphoid tissues, to the lymph nodes and the diffusely distributed similar tissues

I shall preface my remarks on pathologic conditions by some statements of the normal The lymph node is essentially composed of a mass of small lymphoid cells intersected by spaces and channels There is a broad space or sinus around the convexity of the kidney-shaped structure and from this channels are given off which run toward the hilus separating the cell mass into small divisions or strands The sinuses are crossed by numerous strands formed, the larger by connective tissue, the smaller by anastomosis of cell processes The sinuses and the septa are lined by endothelial cells and the cell strands are composed of such cells The lymphoid cells are supported by a reticulum of connective tissue and probably by a finer reticulum formed of branching cells

In the masses of small lymphoid cells particularly along the convexity, there are round or oblong foci of differentiated cells These foci were first described by His and afterward more fully studied by Fleming, who regarded them as the centers of cell production or germinal centers The diffusely distributed lymphoid tissue represented by the tissue in the alimentary canal between the submucosa and the epithelium differs from this structure both in the character of the cells and in their arrangement In this tissue there are at intervals cell aggregations resembling a portion of a lymph node with one or several germinal centers The definite lymph sinuses, which are so conspicuous in the node are not evident in this tissue Masses of lymphoid tissue very similar to the cell aggregations which compose the intestinal follicles are found in the spleen along the arterial branches There are also small lymphatic foci in the lungs of children which repeat in miniature the structure of the node I have never known just where to place the thymus in the category of the lymphoid tissues It contains no germinal centers and has seemed to me a place of destruction of lymphoid cells by phagocytes rather than of their formation

There is one thing which comes out strongly in the study of the lymphoid tissues, and that is their preponderance in the child There is a steady atrophy with age The activity of the intestinal lymphoid tissue is the most persistent One can, as a rule, easily judge of lymphoid activity by the presence of germinal centers In the lymph nodes of children they are rarely absent, in adults they are usually absent unless there is some condition which excites activity in local nodes Another point of interest is the greater activity of the tissue in small mammals In the monkey, rabbit, guinea-pig, dog and mouse active lymphoid tissue is the rule

Under normal conditions in the nodes cell production is confined to the germinal centers and the terminal cell is the small lymphoid cell The cells composing the centers differ so much in appearance from these that one has at first the inclination to regard the center as a definite tissue enclosed in the node in some such way as the islands of Langerhans are enclosed in the pancreas This is accentuated by finding at times a more or less distinct capsule around the center separating it from the surrounding tissue Usually the small lymphoid cells are massed more closely immediately around the germinal center The cells in the germinal center have a very indefinite, loose, pale protoplasm not granular and staining a faint lilac with the methylene blue and eosin stain The cell outlines are indefinite, and in many cases can not be distinguished The nuclei vary in size from 5 to 8 microns and are typically vesicular They have a sharp edge and a small amount of chromatin which is placed at the rim and in small clumps in the interior Thin chromatin filaments usually connect the single masses Nuclear figures are very abundant and usually imperfectly preserved The cell mass much resembles active embryonic tissue Among these cells, and progressively increasing in number toward the periphery, there will be found numbers of the small lymphoid cells, and in the tissue outside of the center scattered germinal cells will be found There is always found in the center rather evenly distributed among the germinal cells a number of larger cells, with vacuolated acidophilic cytoplasm and large, pale, vesicular nuclei These are eminently phagocytic and contain cell and nuclear fragments seemingly derived from small lymphoid cells Nuclear detritus may also be seen not enclosed in phagocytic cells As Fleming and others have shown, capillaries are abundant in these centers As much as the germinal cells seem to differ from the small lymphoid the transition to the latter can be followed The change seems to be produced by contraction of both cytoplasm and nucleus The transudation stream is evidently from the center to the periphery, and the newly formed cells are swept by this into the surrounding tissue

The germinal centers play an interesting part in the pathology of the tissue Oertel was the first to show that in diphtheria there were foci of necrosis in the lymph nodes corresponding to the germinal centers Similar foci are common in scarlet fever, in smallpox and in other conditions The necrosis is rarely regional usually all the germinal tissue in nodes, in spleen and in intestine is affected The cells seem to be extremely vulnerable, for they are equally affected in seemingly

different toxic conditions The presence and the contents of the phagocytic cells show that necrosis takes place even under normal conditions In many infectious conditions the germinal centers are not affected, but I have not been able to make as full comparative studies in this direction as I wish to In a series of cases it is easy to follow the course of the pathologic process in the centers The destruction is due not only to the vulnerability of the cells, but to the abundance of the capillaries and the probably abundant transudation which brings a greater amount of the toxic substance contained in the blood in contact with them I do not believe that in this case the destruction is by phagocytes but that these simply ingest the dead and injured cells

There seems at first sight a lack of harmony in the facts set forth, in smallpox, scarlet fever and diphtheria the germ centers which must be regarded under normal conditions as the source, either principally or alone, of the normal lymphoid cells, are destroyed, yet in these diseases there is a vast increase of cells of the lymphoid series I have recently again gone over a large number of lymph nodes from cases of diphtheria, scarlet fever and smallpox All of these show the same conditions but the diphtheria nodes, owing probably to better preservation, have proven best for study All the pathologic conditions from the beginning necrosis of single germinal cells to the disappearance of the center can be easily made out. With the disappearance of the germinal cells a nodule formed of phagocytic cells having some resemblance to a miliary tubercle appears There is a tendency to fusion of the cytoplasm, the individual cell outlines are distinguished with difficulty There may be some remains of nuclear detritus but usually with the formation of the phagocytic nodule this has all disappeared. I have not been able to clearly follow the disappearance of the phagocytic cells There is no necrosis or it is not evidenced in the usual way The cells fuse together into an indefinite, small, shrunken, reddish stained mass, in which swollen fibers of the reticulum which had not formerly been present appear The capillaries in the centers disappear, probably by simple compression their cells adding to the necrosis The most marked changes are found in the large germinal centers of the tonsils The necrosis here is massive and is often complicated by hemorrhage and fibrin formation. The phagocytic cells become involved in the common necrosis and their activity, so prominent a feature in the nodes elsewhere, is not manifest There is no resemblance in the fate of the phagocytic cells to the caseation of tuberculosis. At no time do polynuclear leucocytes play a part

During this process of germinal center destruction the nodes show evidence of marked activity There is nearly always edema Not only are the sinuses dilated, but the cells in the reticular tissue are separated from one another The macroscopic swelling of the nodes seems to me due more to edema than to cell increase There is no increase but rather diminution in the number of small lymphoid cells There is more or less destruction of these cells evidenced by fragmented and pycnotic nuclei The cellular activity is in cells not normally present in the node These cells vary so much in size and structure that no single description will apply to them The most common type is a cell with a rough, irregular border the cytoplasm not smooth and not definitely granular There are no distributed granules similar to those in the granular cells The cytoplasm has a tendency to the basophilic stain. The shape of the cell is round, oval or irregular The nucleus in size corresponds to the cell It is often placed eccentrically and two nuclei are occasionally seen The nucleus is vesicular in type, the edge sharp, with one or several chromatin clumps in the interior There is great variation in size of the cells the average being about 10 microns with nuclei 7 microns Very large cells up to 20 microns with nuclei 12 microns may be found Nuclear division is active. With the appearance of the nuclear figures the cell cytoplasm becomes intensely granular, the granules varying in size The cell is sometimes surrounded by a cloud of these irregular deeply stained granules which have seemingly been cast off from the cell There are other cells which differ from these in that the cytoplasm stains more intensely blue, and others which closely approach the plasma cell type I have occasionally found cells which can not be distinguished from myelocytes, both those with basophile and amphophile granules All of these cells share in the mitoses Eosinophile cells of the marrow type are also found These cells are found everywhere in the node, in the reticular tissue and in the sinuses They are rather more numerous in the lymph strands than in the convexity of the node They may be scattered or in groups, the latter presenting some resemblance to a germinal center I have occasionally found cells with a peculiar conformation consisting in a cap of intensely stained blue granules at one or both poles The granular mass seems to be an addition to the surface of the cell, for it makes a distinct projection above the curve I have never found such cells outside of the lymph nodes and know of no explanation for the appearance The cells are numerous in the efferent lymphatics, in the hilus of the node and nuclear figures are found in them here The cells in the sinuses often differ in having a more reticular cytoplasm with definite vacuoles around the periphery They are also in the blood vessels, and I have seen them in the walls in the act of migration The spleen usually contains great numbers of these cells around the follicles and in the pulp Here also mitotic figures are numerous, and the cells are often in groups Polynuclear leucocytes play no part in the process, they may be present in the sinuses in considerable numbers if there has been suppuration in the lymph territory of the node, they are usually degenerated and enclosed in phagocytes

Phagocytic cells are present in the sinuses in great numbers, the sinuses may even be filled with them. There is no difficulty in distinguishing the phagocytic cells from the others, and no transitions are seen between cells of the lymphoid type and phagocytic cells Nor can there be any doubt as to the origin of the phagocytes They come from the endothelial cells lining the sinuses Nuclear figures may be found in the cells attached to the sinuses and rarely in the free cells Cells usually lymphoid are found enclosed in them Apparently these cells are not always dead when ingested, as far as this can be determined by the appearance of the cell The endothelial proliferation is not confined to the lymph endothelium In all these nodes one is struck by the marked change in the endothelium of the vessels The nuclei are large, closely packed together, and often lie with their long axes perpendicular to the lumen of the vessel Nuclear figures are found in the cells and some of them appear in the act of detachment Phagocytosis of lymphoid cells by the cells attached to the vessels may be seen In the spleen similar changes may be seen in the cells lining the sinuses Whether such newly formed cells originating from the en-

dothelium of blood vessels migrate and contribute to the number of phagocytes in the sinuses is undetermined The ingested cells often appear in all respects to be normal and even nuclear figures may be found in them

To sum up, we may say that in certain of the infectious diseases changes consisting essentially in necrosis and following proliferation take place in the lymph nodes These changes, though they may be accentuated in regions, are general, affecting all the foci of lymphoid tissue The necrosis is chiefly in the germinal centers, but in addition there may be destruction of the scattered small lymphoid cells The necrotic cells are taken up by phagocytes, which are in part normally present, but their numbers are greatly increased by proliferation of the endothelial cells of the sinuses. The new formation of cells does not as normally or at least does not immediately lead to increase in the small lymphoid cells The new cell formation seems to start from cells of an indefinite character resembling those found in the germinal centers In part they seem simply to grow in size, retaining their characteristics, in part by change in cytoplasm and shrinkage of nuclei they become converted into plasma cells and cells may also be formed which can not be differentiated from myelocytes Polynuclear leucocytes play no part in the process When present they can be regarded as accidental and due to suppuration in the regional lymphatics of the node The newly formed lymphoid cells enter into the blood in part by means of the efferent lymphatics, in part by migrating into the vessels Such cells are found in blood vessels in all tissues of the body They seem not so fully to be adapted to the blood movement as are the normal leucocytes This may be due either to a difference in specific gravity or to the character of their cytoplasm The normal leucocytes are cells with smooth surfaces, the polynuclear leucocyte certainly has on the outside a layer of differentiated cytoplasm constituting a species of cell wall These cells have a rough, irregular outline More of these are found in the capillaries of the liver than polynuclear leucocytes even in conditions of high leucocytosis as in pneumonia They are found in great numbers in the vessels of certain organs, as in the kidney From the vessels they pass by active ameboid motion into the interstitial tissue and may be found there in such numbers that the weight of the organ may be trebled In the interstitial tissues the cells have a greater tendency to plasma cell differentiation than they have elsewhere and foci may be found composed of typical plasma cells The cells have marked power of proliferation and nuclear figures are abundant. In the process of division the cytoplasm becomes more granular and granules are cast off I have not been able to determine a relation between these foci and injury or degeneration of the tissue The interstitial foci are more frequently found in the kidney than elsewhere Next to the kidney they occur in the adrenal glands The cells in the interstitial tissue in the necrotic foci of the testicle which are found in smallpox are of a similar nature In animals I have found similar conditions only in the mouse, in which animal interstitial foci in the kidney are common In the interstitial foci there is usually no accompanying infiltration with polynuclear leucocytes I have seen bacterial foci with necrosis and polynuclear leucocytes and the interstitial foci in the same kidney with no commingling of cells There may be commingling if bacterial infection or necrosis occurs in the same region with the interstitial foci but the processes are independent

In the normal tissues we have an analogous form of activity of the lymphoid structures The lymphoid tissue of the alimentary canal has normally an action very similar to that which we have described in the lymph nodes Such activity is found in all parts of the intestine and varies in degree In the lymphoid tissue here the germinal centers are prominent and cell proliferation rapid Phagocytic cells are prominent and always contain nuclear fragments A part of the newly formed cells seem to become small lymphoid cells Others give rise to cells of the types we have been considering It must not be forgotten that, although nuclear division is more common in the least differentiated cells it is also found in the larger cells and in the cells of the plasma cell type The entire mucous tissue of the intestine may be crowded with these cells The plasma cells tend to accumulate close beneath the epithelium I have been able to acquire small pieces of mucous membrane from the surgical clinics which were removed in the course of operations requiring the opening of the stomach and intestine Often some more or less obvious pathologic condition could be recognized in the tissue removed The lymphoid infiltration in the stomach is more prominent in the pyloric than in the cardiac region It varies enormously in degree In certain lesions as in ulcer and carcinoma, it was intense In pathologic conditions the principal cells were plasma cells I was surprised at the very small amount found in the stomach of a suicide In the intestine the infiltration increases progressively, reaching its acme in the vicinity of the ileocecal valve and in the appendix In many pathologic conditions there is an enormous increase in these cells, in others, as in tuberculous lesions, they may be entirely absent.

There is also analogy in the lymph nodes of the smaller mammals The nodes of all the apparently normal guinea-pigs I have examined show a remarkable degree of activity leading to the formation of large cells I have found such cells in the sections of blood vessels The most remarkable degree of lymphoid activity I have encountered is in the follicles of the dog's intestine Here the germinal center may occupy almost the entire area. It is crowded with nuclear figures and the phagocytic cells are numerous

In the course of my work on the lymphoid structures it was necessary, of course, to study the blood and the bone marrow Certain ideas as to the blood as a whole and the cytologic relation between the blood and the blood-forming organs have been forced on me I do not think it possible at this time to construct any scheme of leucocyte formation which will not be largely hypothetical and as a hypothesis I venture to produce this But little can be gained by the study of the blood alone It contains almost entirely cells which have undergone full differentiation and which enter the blood as completed products As such we have the polynuclear leucocyte a cell with high ameboid activity with marked phagocytic powers for bacteria and utterly incapable of further differentiation and of proliferation Under normal conditions they have a definite numerical equilibrium with the other cells The type of the lymphoid cell as found in the blood with the small round nucleus with rim chromatin and [illegible] is a completed cell incapable of further differentiation or increase It is more [illegible] than the [illegible] and is influenced by chemotaxis but not to the degree as is the polynuclear [illegible] this as cell [illegible] the polynuclear leucocyte [illegible] is counted [illegible]

a cell identical with or indistinguishable from this cell as the primordial germinal cell of the blood Maximov regards it as the cell from which his polyblasts arise In the various cell schemes which the hematologists love to form and for the truth of which they are willing to fight and bleed and die, at least on paper, and which differ from one another chiefly in complexity, cells of the small lymphoid type figure as primordial cells There is a mistaken idea as to the structure of a nucleus which is associated with proliferative activity Relative to its size the nucleus of a proliferating cell contains but little chromatin It is vesicular Such nuclei are always found in rapidly proliferating cells whether in the embryo, in tumors, in regenerating tissue or in blood-forming organs The evidence that the small lymphoid cell is an inactive cell lies in the character of its nucleus, in the fact that no nuclear division is ever seen in it, and that these are the cells in which destruction is most obviously taking place No member of the lymphoid group of cells is phagocytic either for other cells or for bacteria. No cells are so constantly destroyed and removed by the cell phagocytes The non-granular mononuclear cell of the blood, the so-called transition cell of Ehrlich, is phagocytic for other cells chiefly lymphoid and rarely for bacteria It is an active cell and capable of division, but probably not of further differentiation These are the three types of cells which concern us The lymphoid cell under normal conditions is formed in the lymph nodes The formative cell is the germinal center cell, the newly formed cells gaining the type of lymphoid cell by contraction of both cytoplasm and nucleus. The transition is short and does not take place by definite intermediate cell forms The polynuclear leucocyte, however, has a much more complex formation The primary formative cell for this is a cell with little differentiation and in its general characteristics resembling the germinal center cells of the lymph nodes The polynuclear cells are formed from this cell passing through well characterized cell stages, in the first of which, the premyelocyte, the cytoplasm becomes abundant and indefinitely granular The cell has some superficial resemblance to the plasma cell, but retains the active vesicular nuclear type The myelocyte is formed from this cell by the differentiation of amphophile granules in the cytoplasm, and from this the polynuclear cell is directly formed Mast cells and eosinophile cells are also formed by differentiation from the premyelocyte Nuclear figures seem to me to be less common as differentiation proceeds Nothing corresponding to the germinal centers can be distinguished in the marrow, and we at no place find the proliferative activity which is shown in the germinal node centers If we consider the sum of the lymphoid tissue, it is much greater both in the child and in the adult than the sum of the myeloid tissue That the myeloid tissue is capable of rapid and enormous increase in its activity is shown by the pyogenic infections The eosinophile cells are formed by differentiation in the myelocyte series but I do not think exclusively there I feel sure that they may be formed in the intestinal canal and in pathologic conditions elsewhere There is not a sharp separation of the two best marked varieties of leucocytes when we consider their histogenesis The cell which can be regarded as the mother cell is practically the same for both In the bone marrow it produces the myelocyte series, in the lymphatic tissues the lymphocyte series It is the locality which determines Even in the marrow there is some differentiation toward the lymphocyte series It need not surprise us that under pathologic conditions there may be confusion in the process, that myelocytes may be formed in lymphatic tissue, and that the marrow may take on chiefly lymphatic activities

I feel that I must make some apology for this paper in that it hardly touches on the questions which are uppermost. What concerns us now very much more than the questions of cell origin is cell function What is the relation between lymphoid tissue and growth? Why is the lymphoid tissue most developed in the period of most active growth and why the decline in age? Why do we have the peculiar forms of activity which are shown in the intestinal canal? Why the constant association between active new formation of lymphoid cells and phagocytes which devour them? Why the association of lymphoid cells with the formation of tissue in which they can not take part? Why do certain diseases call forth such high degrees of activity in lymphoid tissues, while other diseases, such as tuberculosis, do not? Why should there be such differences in the amount of lymphoid tissue and in its proliferative activity in different animals? Have these cells any relation to immunity production? Those diseases in which activity is the most manifest are characterized by a definite immunity production, but I should hesitate to base any conclusion on this fact

To all these questions I could contribute nothing but half-formed and indefinite ideas without a sufficient experimental basis Toward the solution of some of them there must be more thorough study of the cell activity of the lymphoid tissue in different diseases, and for such study I make a plea

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MENINGISM AS DISTINGUISHED FROM MENINGITIS

FROM AN OTOLOGIC VIEWPOINT *

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DEFINITION

Meningism is a morbid state characterized by a meningitic syndrome without intracranial inflammation. Obviously the word pseudomeningitis, or false meningitis, can not be applied, as there can be no such thing as a false inflammation The term "meningeal irritation" is defective, inaccurate, and anyway, can be applied only to a limited class of cases

The name meningism has been applied by the French neurologists to several morbid conditions associated with a meningitic syndrome None of these writers treat the subject from an otologic viewpoint. Dupré writes

> In the course of some infections or intoxications, or certain morbid states less well defined (dentition, helminthiasis, etc.), of which the indirect influence is called reflex, there may appear, most often in young and hysteric subjects, a syndrome more or less closely simulating the picture of meningitis The forms, acute or chronic, cerebral or spinal, of meningism, are of nice diagnosis, and of reserved prognosis, for, aside from the fact that the patient may die of meningism without meningeal lesions, the appearance of the syndrome, by indicating a particular vulnerability of the cerebral cortex, foreshadows the later possibility of a true and fatal meningitis The pathology of these "accidents," inexplicable by the negative results of autopsies, seems attributable to an action exerted on a cerebral cortex, hereditarily predisposed, by poisons of

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external, internal or microbic source. The solution of the pathogenic problem is reserved to the technic of the future, which will demonstrate lesions invisible to dynamic pathology

Pochon elaborated Dupré's work, but included also two additional classes The toxic (alcoholic, phosphoric, uremic, etc), and the hysteric, the toxic nearly corresponding to what some English and American authorities have classed as serous meningitis and pseudomeningitis, as of alcoholism Rocca describes the variety associated with infectious diseases While these and others have described the condition as seen by the internist, no exhaustive study of the subject from the otologic viewpoint has come to my notice By this it is not meant that the condition is unrecognized In his classic text-book Dench aptly says

In children the diagnosis [of meningitis] is much more difficult, since any acute infectious disease or a disturbance of the gastrointestinal canal will give rise to exactly the symptoms above mentioned.

As every otologist knows we are often called on, as in a number of the cases reported herewith, to determine whether meningitic symptoms are due to ear disease or to the concomitant general malady The frequency with which this problem arises in otologic differential diagnosis, it seems to me, justifies the nosologic independence of the morbid condition With the object of urging the recognition, not so much of this name, as of some name for the condition, I present this study The sooner the morbid condition is allowed a place in nosonomy, the sooner will its pathology and diagnosis be developed

Diffuse infective purulent leptomeningitis almost invariably ends fatally A few preëminent operators like Dench, Jack, Macewan and others have reported authentic cases, but these are so rare as to prove the rule as exceptions In an enormous experience Dench has seen but a single case To operate on a patient who will certainly die is to discredit otology, and prevent or delay consent in other and operably curable cases To operate on a child whose symptoms are due not to an extension of its ear disease but to the toxemia of an acute infection, is to make a grave mistake. To fail to operate on an operably curable mastoid or a middle ear disease which is producing grave symptoms is a fearful error

Now when it is admitted, as all experienced otologists will admit, that all of the assident, and many of the considered pathognomonic signs of meningitis may be present in the absence of intracranial inflammation, this condition, call it meningism or what you may, merits closer study than it has ever yet received It is my hope that this paper, which is chiefly clinical, will incite the interest of others better able to solve the problems especially those of its pathology, which seem particularly obscure Much work also remains to establish a more certain basis for early differential diagnosis

I am by no means certain that some of the cases I have classed as irritative meningism were not serous meningitis, but there is no evidence, clinical or pathologic that cases of this kind are associated with serous infiltration or exudation and it would seem better to acknowledge our ignorance of their pathology and class them clinically under their syndrome In regard to the toxemic variety there can be no question as to the absence of a serous exudate or any discoverable lesion, and to class such cases as pseudomeningitis is a misnomer

Fulminating cases of epidemic cerebrospinal meningitis have occurred where no macroscopic or microscopic lesions other than intense congestion were discoverable at the autopsy This casts serious reflections on the pathologic research of the day and caused me some hesitation in urging the recognition of a name for a condition based on failure to discover a lesion In these fulminating cases death is due probably to overwhelming doses of toxins, and would later develop inflammation if the patients lived Yet this does not lessen the necessity for study in an effort to recognize another condition in which toxemia or other factors produce symptoms, but do not later end in inflammation

Hyperemia probably exists in some cases of meningism, and it may be argued that hyperemia may be considered the first stage of inflammation and that this justifies calling these cases meningitis, but a passive meningeal hyperemia is no more a meningitis than is the climacteric flush a dermatitis

VARIETIES

The cases which I have observed may be conveniently classified, clinically and pathologically, under three heads, irritative, toxemic and reflex It must not be inferred that these varieties are always distinct, as two or all may coexist.

ETIOLOGY

Predisposing Factors—In his paper which deals with the meningism of acute diseases, dentition, etc, Dupré lays great stress on the abnormal vulnerability of the cortical zones In some instances he considers previous attacks of meningism as factors in increasing vulnerability to a point where they may be contributory etiologic factors in meningitis A neuropath, as in Cases 8 and 13, must of necessity be more susceptible to meningism than a normal person

Neuropathic heredity, as shown in nearly all of my cases, is frequently a predisposing factor in vulnerability

Nerve cell "habit" is a factor in vulnerability Its influence in the nosogeny of the erethismic phenomena, especially of the convulsions, seems certain Nerve cells which have a number of times discharged, as in a convulsion, naturally are more readily influenced again in a like manner

Hysteria and other neuropathic antecedents are likewise etiologic All these are shown in my case reports

Age is an important predisposing factor Of 62 cases, 50 (81 per cent) patients were under 12 years of age Adults, however, are not exempt, especially neuropathic individuals, as frequently seen in severe typhoid fever cases, and as shown in one of the appended cases Sex is also a factor Of the 62 cases 48 (80 per cent) patients were females

Exciting Factors—Irritative Cases Traumatism, as from operative work (especially if rough) corrosive solutions, as mercuric chlorid, in cases in which the brain or meninges (even if only the dura) are exposed, are factors This often follows work on the venous sinus as shown in Cases 1 and 2 It is a frequent error, and one I committed myself in my earlier work to make too much pressure in applying the dressing in obliteration of the cerebral sinuses Very little pressure is required

Toxemic Cases As shown by my cases and as recognized by internists and pediatrists, the e may be excited in vulnerable individuals by the toxins of almost any acute infectious disease as the exanthematic typhoid fever, pneumonia acute rheumatic fever mal rial fevers, gastroenteritis colitis etc Toxemia of course, may be favored by uremia, faulty metabolism or defective el mination.

Reflex Cases Helminthiasis, as in Case 8, and dentition as in Case 11, are factors

The etiology of "meningisme pyretique" of the French authors is explained in the name, whatever theory as to its pathologic mechanism may be adopted Obviously, the influence of the temperature *per se* can not be separated from the influence of the toxins proceeding from the same basic cause as the temperature itself The etiology of any given case doubtless may partake of any one or all of these factors

PATHOLOGY

Because of the rarity of autopsies, the pathology must be deduced from clinical observations of living tissues and of symptoms This is a very unsatisfactory pathology, and yet from the very fact that recovery is the usual criterion of a non-inflammatory condition, autopsies must be rare

The pathology of some cases may be similar to that of a functional neurosis, which has no anatomic basis Like a neurosis it is subject to reclassification, as refinements of pathologic research shall demonstrate that some of the cases are due to then recognizable lesions Much light would be shed on the pathology of meningism if it had a perfectly satisfactory conception of the pathologic mechanism of those fulminating cases of cerebrospinal meningitis which are fatal before any microscopically discoverable lesion is produced As to the site of the pathologic influence, it is very certain from analogous symptoms that result from actual lesions in other diseases, that the cortical and subcortical cells are influenced as well as the meninges

Pathologically, cases of meningism may be classified under three heads 1 Toxemic meningism, and 2, reflex meningism, in both of which there are absolutely no discoverable lesions 3 Irritative meningism, in which there is a non-infective hyperemia without leucocytic migration or serous exudation In the irritative class may be placed those cases seen by every otologist, in which an acute otitis media in children produces marked meningitic symptoms, which clear up promptly on incision of the drum membrane To quote Dench

> In children, when the tympanic roof is exceedingly thin, it is not improbable that the meninges in the immediate neighborhood are congested, but the process stops here, and true meningitis is not developed

One autopsy exemplifies this, Case 3

Irritative meningism is also seen in cases in which the cerebral membranes have been subjected to rough handling, to the contact of strong antiseptic solutions and to similar irritations These irritations have been noticed doubtless by all otologists, and are exemplified in Cases 1 and 2 That there is a zone of cortical irritation around the site of a brain operation, especially the kind of brain operations the otologist is constantly doing, seems plausible, the state probably being one of increased circulation, and of direct influence on cells adjacent In this class of cases the meningeal congestion is often apparent to the operator's eye on the living subject If the case is one of meningism, this increased vascularity does not reach the stage of exudation or leucocytal migration The influence of operative trauma on the cortical cells independent of, or in the absence of, increased vascularity, is probable

An increase in the amount of the normal lymph in the pial spaces, or a slight pial edema might escape notice at an exploratory operation or at an autopsy Then, again it must be admitted that in the absence of organisms their toxins may excite a degree of congestion bordering on or possibly reaching inflammation Some of the cases in which the meningitiform symptoms are bilateral may be thus accounted for by the effect of nosotoxins in the circulation, derived from either the purulent otitic focus or from a general malady of which it is the complication The chemistry of the future will isolate from the tissues, or more palpably from the fluids, of these cases, a toxin whose action is productive of meningism, just as strychnin produces its characteristic phenomena

The most marked of my own cases of the irritative form of meningism have occurred after operative work on the venous sinuses of the brain In addition to the irritation of operative manipulation, it is probable that there may have been some venous stasis, due to obliteration of the large venous channel, resulting in a slightly increased quantity of ventricular fluid This, however, does not constitute a meningitis, serous or other, for not only are there no pyogenic organisms or pyogenic processes, but there is no inflammation, either at the site indicated by the symptoms, or elsewhere In these sinus operations cerebral anemia from hemorrhage, shock and collapse, vasomotor paresis of the general or cerebral circulation, are all potent factors, the influence of which, direct and reflex, has never been exhaustively studied

Toxemic and reflex cases, it must be confessed, have no lesions that are demonstrable by the laboratory technic, macroscopic or microscopic, of to-day In other words, these cases have no anatomic basis It may be argued that if toxins act on the cortex they produce at least temporary lesions, be they ever so evanescent On a moment's consideration, however, we will remember that drugs acting on the cortex produce the most marked phenomena without demonstrable structural or even circulatory change apparent at autopsy In regard to the pathology of the fatal cases of toxemic meningism, it is not unreasonable to assume that overwhelming amounts of nosotoxins may prove fatal just as cerebral poisons may, and this without microscopically demonstrable lesions

In an acute infectious disease, with or without ear complications, the nosotoxins acting on the cortical or subcortical cells may produce somnolence, stupor, if not coma, the clinical aspect differing in no way from the same phenomena resulting from the inflammatory products of meningitis, or the exudates of the so-called serous meningitis The phenomena are probably due also to circulatory changes in the central nervous system induced by nosotoxins in the fluids and in the blood These changes may be in the form of stasis due to active congestion, initial to acute disorders of childhood or ischemia incident to wasting disease, as cholera infantum The prompt relief of symptoms by small doses of morphin points to the importance of circulatory changes in the pathology of meningism

Reflex meningism even more certainly than toxemic meningism may be looked on as without lesions, or at least as having lesions which must be left to the refined pathologic technic of the future to demonstrate That reflex influences may have profound and even fatal effects on the sensorium is well known With both the toxemic and reflex forms, in the absence of autopsies, and of the clinical observations of paralysis, pressure and depressive symptoms, I do not see any grounds for the assumption that such cases should be classed with serous meningitis In regard to the pathology of the convulsive and other phenomena of high temperature, the "meningisme pyretique" of the French, but little is really known,

though plausible theory is not lacking The same may be said of the occurrence of optic neuritis in the toxemic or reflex meningism of acute otitis media As to the pathology of the optic neuritis noted in one instance, I have nothing to offer As all know, this has been noted in acute otitis of children, without any really satisfactory demonstration of its nosogeny

SYMPTOMATOLOGY

In general, it may be stated that any or all of the early symptoms of meningitis may be present in meningism The late symptoms were only present in four of my cases The symptoms are those of cortical erethism, not those of cortical depression All of the symptoms may be modified and intermingled with those of the intercurrent malady An initial chill was noticed in a few of my cases, but was probably present though unnoticed in many of the others Convulsions were noted in thirteen cases, usually not repeated In some of the cases doubtless the convulsion may have been due in part or wholly to the high temperature In one case it was due to postoperative cerebral anemia, and in another to stasis following operative obliteration of the lateral sinuses Vomiting was constant, being noted in 48 cases Paralyses were not noted in any instance, the nearest approach being pupillary phenomena, and these were more likely erethismic than paralytic, probably spastic miosis The strabismus noted in 3 cases was probably the manifestation of latency Loss of sphincteric control in children is not necessarily paralytic, and incontinence of urine and feces occurs without sphincteric paralysis Anesthesias were not demonstrated, though they were only searched for in a few instances Coma was notably absent, the nearest approach being stupor, which was present in 5 cases, nearly all cases of the toxemic variety Persistent stupor was present in some of the toxemic cases, and stupor was reached in a few instances, but absolute coma was not.

Temperature The temperature was usually constantly elevated, the maximum being 105 2 Remissions occurred in some instances In other instances it was modified by an intercurrent disease, and by spongings Nothing characteristic was noted Doubtless further observation will accumulate valuable data In general, it may be said that the temperature was that of meningitis, though usually of lower range This can not, however, be considered characteristic, as of course we all see meningitis with moderate temperature elevation

Pulse The pulse may be said to have been rapid in proportion to the temperature, and to have been comparable to that of the early stages of meningitis In no instance was it indicative of pressure. Nothing characteristic was noted

Respiration This seemed to follow the pulse and was arrhythmical only when interfered with by convulsive and spasmodic phenomena. Constipation was present in a number of cases Vomiting was present in most cases

Cephalalgia Cephalalgia was a practically constant symptom It was referred in most instances to the frontal and temporal regions When monolateral it was referred to the side of the affected ear, but even in monolateral ear cases it was in most instances bilateral Rarely was it limited to the occiput. Hyperidation was doubtless present oftener than noted Vertigo was noted a number of times, but its presence in children is not always easy to determine Delirium was an almost constant symptom

Jactitation This was present in many cases Case 1 is typical of this Fibrillary movements were noted in a few instances

Spasms Spasms were present in the severe cases, tonic in some, clonic in other cases, monolateral in several instances Trismus was noted once Grinding of the teeth was noted a number of times

Nuchal Rigidity This was one of the most common symptoms and was usually indicative of the toxemic variety

Photophobia Photophobia was often present, but whether only apparent, due to irritability of temper, or to normal sensitiveness following almost constantly closed lids, was not determined Other hyperesthesias as of the general surface were noted in a few cases

Tache Cerebrale This was absent in the cases tested, though it was not searched for in every case Aphasia was present in one case Kernig's sign was present in four instances

PROGNOSIS

The prognosis is favorable, provided the condition be not the forerunner of a true meningitis In view, however, of our inability to differentiate these cases, the prognosis must necessarily be grave The meningitic syndrome initial to the acute febrile diseases of childhood is not of grave prognosis in itself, but only as indicating the severity of the basic disease If, in a given case, the syndrome is due to the basic disease and not to the ear complication, the prognosis is evident In medical meningism, Dupré, Belfanti, Auscher, Herge, Claisse, Solher and others cite fatal cases of meningism without discoverable microscopic or macroscopic intracranial lesions Some of these authors also consider the occurrence of meningism indicates a vulnerability of the cortex, which foreshadows the possibility of the condition later developing into a true meningitis

DIAGNOSIS

The diagnosis of meningism must be considered from two viewpoints First, the differentiation between meningism and a true meningitis Second, as to whether the meningism is due to the basic disease or to the ear complication, the etiologic diagnosis

When meningism occurs in a case of ear disease complicating acute disease, otologists should be able not only to make a diagnosis of meningism, but to differentiate as to whether it is due to the otitic or the general malady That we are rarely able to do this until late, indicates the necessity for study of this condition The most positive diagnostic point is the recovery of the patient who has had the meningitic symptoms Unfortunately, however, this almost pathognomonic sign is not available at the time most needed Patients with serous meningitis also recover, but this usually can be excluded as hereinafter indicated

Changes in the fundus oculi are usually late, but are of value if positive, indicating meningitis, or at any rate intracranial lesion If negative they are valueless, and it must not be forgotten that optic neuritis has been observed in acute otitis media in the total absence of intracranial symptoms In one of my cases of irritative meningism Dr Glendon F Curry found paleness of the disc, haziness of the retina with capillary congestion, but no engorgement of the larger vessels

Lumbar puncture, with subsequent microscopic examination in meningitis is only of value curatively when positive and it is only positive so late that the diagnosis is readily made from the symptoms alone

The tache cerebrale was absent in all of the 62 cases observed

Of the 62 cases, in only 8 was a blood examination made In these 8 leucocytes were increased, but, as pus was present, the value of leucocytosis diagnostically is not yet determined An exhaustive blood investigation in all its refinements promises much diagnostically, as well as pathologically

In making a differential diagnosis between the varieties of meningism, the irritative form will be shown by monolateral erethismic symptoms, and will be found after monolateral operative or other traumata The toxic and the reflex forms will be found in conditions in which a source of toxins or of primary reflex irritative cause can be found and the erethismic symptoms are usually bilateral The toxic may co-exist with either of the other forms

While in the early stages of a serous or a purulent meningitis we may be unable to make a positive diagnosis, a stage comes later when a negative diagnosis is readily made This is marked by the onset of pressure symptoms, paralytic phenomena, anesthesias and true coma When these appear meningism is usually excluded Later still, we have further negative evidence in the respiratory disturbances, first those of intracranial pressure and later the arrhythmic phenomena of the periodic type, often the Cheyne-Stokes kind, which forecasts impending dissolution

While it is possible to have this series of symptoms follow an overwhelming dose of nosotoxins in toxic meningism, it is so rare that we will usually be safe in expecting to find intracranial lesions when paralytic and localized anesthetic symptoms have been present Absolute coma may be toxemic, but in the class of toxemic cases we are considering it is rare In acute nonsuppurative encephalitis the cortical depressive symptoms develop early

A diagnostic point of much value as between meningism and meningitis is the quieting action of comparatively small doses of morphin on the erethismic phenomena in meningism Much larger doses are required in meningitis

Epidemic cerebrospinal meningitis intercurrent with a preceding chronic purulent otitis occurred once in my experience and was diagnosticated only after the rash appeared Meningism was previously excluded on the appearance of cortical depressive phenomena

A neuropathic personal history, with hereditary and somatic stigmata and a neuropathic family history, points to meningism, but does not exclude meningitis A history of initial convulsions and delirium with previous illnesses for instance in the exanthemata, should put us on our guard against making a diagnosis of meningitis until paralyses appear

In the acute infectious diseases of childhood the characteristic symptoms usually develop promptly to clear up the diagnosis, as the meningitic syndrome recedes, if the case be one of meningism This short duration of the meningitic syndrome is a valuable diagnostic point. If the syndrome persists it points to organic disease

The toxemic meningism seen in the exanthemata is usually initial and of short duration When nuchal rigidity persists longer than 48 hours, we may in most cases look for graver intracranial developments In acute otitis media if nuchal rigidity with pyrexia and headache persist unabated for 48 hours after a proper myringotomy, meningism is less probable than meningitis

In a case of suppurative ear disease, especially of the chronic form, the headache, acute delirium, vomiting and convulsions, ushering in a fulminant attack of an acute intercurrent infection, as typhoid fever, influenza, pneumonia, etc, are often of difficult early diagnosis A little time for the development of the characteristic symptoms of the intercurrent malady will permit of a diagnosis from the suggestions here given

Toxemic meningism can be eliminated from the diagnosis, in some instances by the use of drastic purgatives, especially calomel Care must be taken here, however, to guard against error The subject of a true meningitis, as well as another, may suffer from autotoxemia, indeed, he is even more likely to suffer thus because of his constipation and his defective elimination, due to disordered innervation I have frequently urged this point, especially in connection with brain abscess

In a monolateral suppurative ear case the sudden onset of bilateral and general symptoms of intracranial involvement without a prior monolateral stage may mean infective leptomeningitis, with infection of the cerebrospinal fluid, or it may mean only toxic meningism Of course, monolateral symptoms in infective meningitis later become bilateral by extension

In the gastrointestinal diseases of children the history of preceding attacks and the short duration, together with the gastrointestinal symptoms, point to the cause of the meningism

In "meningisme pyretique" the symptoms recede with the temperature recession and reappear with the exacerbation, and no cause for the meningitic syndrome other than the hyperthermia is found

Tuberculous meningitis can, I think, be excluded on the duration of the attack, the history of previous attacks, and its insidious onset, usually without convulsions The coincidence of an acute otitis media in a child, with early tuberculous meningitis, once led me into error No previous history was obtainable because of the prior death of both parents I found well-developed tuberculous lesions at my exploratory operation The child recovered promptly from the operation and the otitis, but died six months later of meningeal and mesenteric tuberculosis

In older children hysteria is a possible source of error in diagnosis, especially when it manifests itself in the course of a febrile disease with an ear complication The history of previous hysteric attacks, inversion of the phosphates, loquacious delirium, with distinct statements, instead of incoherent mutterings, all mark hystericism In one of my cases hysteria was diagnosticated on the sole observation that the strabismus was double convergent In another case pyrexia from acute otitis media deceived me until the meningitic symptoms were noticed to follow my ear examinations, subsiding in the interval, and that no symptom beyond volition was present Some French neurologists nosologize a "meningisme hysterique"

Uremia and other toxic comata may be excluded diagnostically by the well-known signs These cases could be admitted nosologically as toxic meningism, but it would seem better to leave them in their present class

TREATMENT

The prophylaxis of the irritative form includes the careful handling of the meninges in operative work, the avoidance of irritative solutions and of undue pressure after exploration of the cerebral sinuses But little pressure is needed When stimulants are required for post-

operative shock after sinus operations, strychnin should be avoided, especially as it is by no means the best stimulant anyway

Rest and absolute quiet in a darkened room are essential The ice bag to the shaved head is grateful and is of benefit High temperature, whether the cause of the meningism or not, is to be combated by sponging

In toxemic cases prompt and energetic stimulation of elimination yields prompt results A brisk calomel purge, followed by salines and vigorous diuretics and diaphoretics, are indicated No food should be given, as it is not absorbed and its decomposition yields toxins If the source of the toxemia be an acute otitis media, I deem immediate termination of the acute otitis by posterior drainage through the mastoid imperatively demanded, even though the mastoid be uninvolved This I urged strongly two years ago To wait for mastoid symptoms in such cases is a disgrace to otology The symptoms of the irritative and reflex varieties are quieted promptly by morphin, though there are objections to its use on account of its masking the symptoms, causing vomiting, etc, and in the toxemic cases it has the additional disadvantage of checking elimination of not only nosotoxins, but of the ordinary autotoxins, which are, of course, injurious, whether they are a factor in the case or not In the reflex form, if the source of the efferent irritative impulse is known, its removal is obviously the first step

CASE REPORTS

Many of the following reports are incomplete, because of meager notes taken before the importance of the subject was recognized Obviously, time forbids a full report of all of the 62 cases, only typical ones are selected It is unnecessary to include the many instances of the type often seen by otologists, in which a meningitic syndrome disappears after myringotomy

CASE 1.—*Irritative Meningism, following Operative Lateral Sinus Obliteration, with Jugular Exsection*

History.—G M, aged 9 female Family history included asthma and insanity, terminating in suicide Patient developed a large mastoid abscess following a right chronic otorrhea of some years' duration Temperature and pulse were normal

Operation.—With the assistance of the family physician, Dr C H Ingram, and Dr W H Strang I opened the right mastoid A large collection of foul pus was found under the periosteum, and there was a gap in the cortex filled with exuberant granulation buds which sprung from the dura over the sinus at the knee All diseased bone was removed and about an inch of the sinus laid bare Incision of the sinus showed it to be filled with septic clot of very foul odor The external jugular was ligated and exsected from the clavicle to the parotid gland. The sinus was then cleaned out to the jugular bulb and backward to the torcular, where a free flow of blood was obtained, the bone being removed for the entire distance, and the sinus being slit open and packed with iodoform gauze, and dressings being applied in the usual manner Temperature, 97 1, pulse, 140 and weak

Postoperative History.—After operation the temperature rose to 100, and the following day 102 2 was reached, the pulse rate remaining about the same, 140 but stronger On the second day the pupils were widely dilated equal and they responded sluggishly to light Photophobia was marked Patient became very restless, cried out when touched, and both the conjunctivæ and the skin were of icteroid hue Patient answered questions clearly when pressed but was exceedingly irritable, and kept saying "Let me alone" Temperature 103 4, pulse 146 Patient vomited once retched several times complained of headache would grind her teeth, and also cry out in sleep, waking at times with a start

On third day the dressings were changed, and wound found in the best possible condition, drainage stains were icteroid There was active delirium, with frequent crying out, muttering at times Patient could be roused and attention fixed for a moment. Kernig was present, together with spastic rigidity of the legs, with feet in 'pigeon toed" varus position. Eye examination by Dr Glendon E. Curry showed 'slight divergent strabismus, patient too stuporous to test the extraocular muscles, both pupils dilated, right responding to light stimulus, the left fixed. Media clear, discs pale retina slightly hazy throughout, capillaries congested larger vessels not engorged" Temperature, 103 1, pulse, 142

On the fourth day jerking of the right arm and hand was noticed, becoming more and more marked, jerking upward until the hand almost touched the face. In the afternoon the right foot began to jerk occasionally, and often the foot and hand would jerk at the same time She could not readily be roused to consciousness, yet actual coma was not present Urinations and evacuations were involuntary Knee jerks were exaggerated Temperature, 103 5 pulse, 138

On the fifth day condition was the same Wound was dressed and found clean The diagnosis of both myself and Dr Ingram was infective leptomeningitis, prognosis unfavorable Both of these would, I am sure, have been concurred in by any otologist had he seen the case. Morphin, gr 1/16, was given hypodermatically which quieted the patient promptly The symptoms began to lessen in severity, and on the sixth day she asked for water, but seemed dazed, and on the seventh she recognized her father Recovery was uneventful

That this case was not infective leptomeningitis is evidenced by the recovery That it was irritative and not toxic is evidenced by its monolaterality That the cortex participated seems certain from the symptoms There seems to be no basis for assuming this to be a serous meningitis It is noteworthy that the child was neuropathic and that the family history included asthma and insanity

CASE 2.—*Irritative Meningism following Operative Obliteration of Lateral and Sigmoid Sinuses*

Patient.—M K, aged 9, female American, emaciated and septic, was sent to me by Dr C J Stybr for operation, with a diagnosis of "pus in the left mastoid, with probable intracranial complications"

History.—There had been a left chronic otorrhea since typhoid fever four years previously There were no ear symptoms other than otorrhea one month prior to operation, when Dr Stybr was called to see the child in convulsions following vertigo There had been no chills, sweats, or temperature exacerbations, so far as known, though as Dr Stybr had been called but twice, once four weeks before, and again one day before operation, this part of the history is uncertain. Temperature, 103 F, pulse 120

Operation.—Chloroform was carefully administered by Dr Stybr, and with the assistance of Dr Allen J Patterson, I opened the mastoid There was no perforation of the cortex, but as soon as this was chiseled through, foul pus was found in every direction in the mastoid cells The inner table was found eroded away over the vertical portion of the sigmoid sinus, the gap being crowded full of black gangrenous looking granulations, of foul odor springing from the dura The gap in the inner table was enlarged in every direction with the rongeur the flakes lifted from over the lateral sinus and knee showing black from chromogenic bacteria

The dura around the black mass of granulation buds was dark crimson, fading to normal only when the sinus had been uncovered back to the torcular This area of pachymeningitis was bathed in foul greenish pus constituting an extradural abscess which was followed in every direction until the dura was found only injected Pus oozed from the mastoid foramen when the periosteum was elevated The sigmoid sinus was uncovered down to the jugular bulb The bone being softened all the way broke down under the curette like honeycomb under a spoon

Palpation revealed that the sinus was soft and heavy at the knee but very firm almost cord like below that point The sinus was split open by an incision about 2 cm in length A firm, organized clot was found to have occluded the lower

sigmoid and the jugular bulb This seemed so firm and healthy that, in view of the extremely bad condition of the patient, it seemed wiser not to disturb it, but to leave to Nature the finishing of what she had so well begun The lateral sinus was slit up backward until the curette could reach the torcular This brought a free flow of blood, when the sinus was packed with iodoform gauze

The patient's condition was so very bad that it was deemed unwise to keep up anesthesia even the 15 minutes longer that would have been required for the exsection of the jugular, especially as it seemed probable that the lower end of the organized clot was not infective The wound was quickly cleansed and packed with iodoform gauze, and a dressing applied Patient was put to bed with raised foot and an enema of very hot salt solution given She rallied fairly well, considering her weak, septicemic condition, and now an opportunity to study her symptoms was afforded

Symptoms—Eye examination by Dr Curry showed photophobia and slight divergent strabismus, fundus negative There was a marked amnesic aphasia For instance she would say "I want—up there," or only, "I want," pointing to a glass of water, of which, when given, she would drink eagerly All nouns seemed forgotten, she could not even say "Mamma," though at times she would recognize and cling to her mother

Jactitation was marked, asleep or awake She was delirious when sleeping, but at times seemed clear when aroused. She would start up and cry out There were tonic spasms of right arm, rigidity of the neck, and occasional choreic movements in other groups of muscles She said she could not see, but this was probably vertigo When raised, she always fell to the left. She was constipated and the urine was scanty, totally suppressed for 24 hours After operation, temperature 100 F., pulse 160, respiration 30 The temperature rose to 103 2 F, pulse fell to 118

Dressings were changed on the third day and the wound was found clean. At the end of a week strength increased and cerebral symptoms gradually subsided.

CASE 3—*Irritative Meningism from Blow on Head*

History—J S, aged 15, male, whose family history included paralysis agitans, convulsive tic and alcoholism, had left chronic suppurative otitis of 7 years' duration following influenza Mastoid was said to have been operated at that time, but discharge from canal never ceased Blow from a baseball bat over left mastoid three days before I saw him was followed by a chill vomiting, headache, delirium, vertigo, aphasia and clonic spasms of right foot. Temperature 100, pulse 120 and soft. The mastoid region was swollen and ecchymosed.

Operation—I advised immediate operation, but found no disease of the bone except a slight necrosis of the posterior walls of the antrum and outer wall of the aditus The inner table was not diseased, and there was no fracture Not feeling satisfied I removed the normal inner table throughout the mastoid wound and then also trephined through an independent scalp flap over the motor area, afterward enlarging the bone wound with the rongeur until I exposed about 6 sq cm of dura The dura was congested, but nowhere was there any sign of actual inflammation, of thickening or exudation The scalp flap was replaced and stitched, and a dressing was applied Then the mastoid operation was completed by the radical method

The meningitic syndrome subsided as if by magic, evidently by the depletion of the operative hemorrhage. Scalp and postaural wounds healed *per primam* and the boy made a good recovery, not only from his irritative meningism, but from his chronic ear disease.

CASE 4.—*Meningism in a Case of Mastoid Empyema, complicating Measles preceding Bronchopneumonia Operation Absence of meningitis Recovery*

History—J B aged 2, male, gave negative family history Patient has Morel's ear

Operation—I operated for acute mastoid empyema, following otitis media complicating measles Dura not exposed Postoperative temperature, 100 for two days, when it rose to 104, pulse, 130, respirations, 40 Chill, vomiting headache, convulsions, nuchal rigidity, photophobia, followed in quick succession. My diagnosis of infective leptomeningitis was changed to toxic meningism, when the attending physician, Dr J B Crombie, made out a bronchopneumonia

CASE 5—*Meningism due to Pneumonic Toxins Mastoid operation Recovery*

History—Family history included fatal singultus, lesion unknown Patient had cleft palate Myringotomy on the sixth day of measles evacuated pus, on the tenth day pneumonia, when temperature 104, pulse 130, respiration 48, developed. On the thirteenth day a convulsion was followed by increasing delirium, photophobia, ocular suffusion of the measles having previously subsided, nuchal rigidity, encephalic cry, twitchings of the muscles of all four extremities impartially Pupils were normal

Operation—I advised immediate mastoid operation in the absence of mastoid symptoms Under local anesthesia by Neuman's method I opened an antrum containing pus and granulation tissue The other mastoid cells being normal, and the inner table seeming sound everywhere exposed, and considering the pneumonia, the local anesthesia, and especially the bilateral character of the meningitic syndrome case, with monolateral ear disease, I considered further exploration unjustifiable.

In 48 hours all symptoms but those of the pneumonia subsided.

Reviewing the case, I think the meningeal syndrome was toxic due to pneumonia, though other interpretations are tenable. The mastoid wound healed in four weeks and, in my opinion, the operation was justifiable as promptly terminating the otitis media before development of possible serious complications

CASE 6—*Toxemic Meningism due to Otitic Toxins, Possibly also to Irritative Reflexes from Pressure*

History—O M, aged 2, female, had acute otitis media following whooping cough There had been a convulsion, nuchal rigidity was marked, and there were vomiting, constipation, muscular twitchings, and the hydrocephalic cry These symptoms were noted by Drs W P McCorkle, W M. Campbell, and H E. Clark, all able clinicians When I saw the case the drum membrane had ruptured pus was flowing freely, the symptoms were abating, and they disappeared in twenty four hours from their onset. A mastoid operation was required a week later, but there was no return of the meningitic symptoms.

CASE 7—*Laryngeal Diphtheria, Otitis Media Acuta, with Cerebral Symptoms Death from Asphyxia Autopsy*

History—J T, aged 4, male had laryngeal diphtheria, undiscovered and untreated until the third day Intubation and antitoxin On fourth day the symptoms were nuchal rigidity, vomiting (even with tube out) heterolateral twitching of arm and leg, pupils dilated and sluggish In the evening profuse serosanguinolent discharge from right ear was followed by subsidence of all signs of cerebral irritation Death occurred on the fifth day from asphyxia. The child had coughed up the tube, unnoticed by the mother

Autopsy—Autopsy showed slight congestion of the meninges over the tegmina tympani et antri of the affected ear It is probable that at the time the meningitic symptoms were noticed the congestion extended farther There were no signs of actual inflammation nor of a serous exudate or infiltrate Bacteriologic examination of fluid from the pial spaces at the congested area was negative.

CASE 8—*Reflex Meningism due to Helminthiasis*

History—M L, aged 8, female, gave a family history of hysteria, neuralgia, diabetes, and a personal history of chorea Right foul purulent otitis media since scarlatina, 3 years Patient was anemic and emaciated, supposedly from absorption.

Symptoms—Cephalalgia, convulsion vomiting vertigo, clonic spasms resembling chorea alternately in all four limbs without selection also of the nuchal muscles. Temperature normal pulse normal in rate and tension

Diagnosis—As consultant I was inclined to exclude an ear complication on the perfectly normal pulse tension and choreic nature of the nuchal rigidity On my tentative diagnosis of toxemic meningism the attendant gave a brisk calomel purge, which to our surprise brought away all but the head

of a large tenia mediocanellata The symptoms all subsided at once and our diagnosis was changed to reflex meningism.

CASE 9.—*Reflex Meningism due to Dentition*

History.—R. K., aged 18 months, male, whose family history included dementia and epilepsy, had had chronic suppurative otitis media since measles at 6 months

Symptoms.—Convulsion, vomiting, trismus, constipation, nuchal rigidity Temperature, 102 No signs of mastoid involvement On incision of the gums over the anterior molars all symptoms promptly subsided

CASE 10.—*Hysteria Simulating Meningism or Meningitis*

History.—L. L., aged 17, female, had no somatic stigmata. Family history on both sides neuropathic, including asthma, neuralgia, diabetes, dementia Patient had had right chronic suppurative otitis media since measles in infancy Radical operation advised but refused Patient heard and brooded on dangers of otitic brain trouble and read all available literature on the subject of meningitis Operation refused by parents until superimposed mastoid empyema complicating la grippe occurred two years later

Postoperative History.—Following radical operation, which did not expose the dura at any point, headache, persistent vomiting, nuchal rigidity, delirium, crying out, convulsions, jactitation and photophobia caused me great apprehension until I noticed that the eyelids were both tightly shut by the orbicular muscles that all symptoms disappeared during sleep, which seemed in every way normal, that all the symptoms were very much intensified at the dressings, and that temperature, pulse and respirations were normal On these observations I based a diagnosis of hysteria which proved to be correct. The phosphatic formula was inverted

CASE 11.—*Meningism due to Influenza Toxins*

History.—S G, aged 5, female, whose family history included diabetes mellitus, hay fever, and chorea, had high fever and delirium with every illness Patient was taken ill while playing and had convulsion, headache, vomiting, delirium, temperature 104, pulse 130 in four hours Next day sneezing, coughing, suffusion of eyes, coryza, led attendant to suspect measles, though immunized by preceding attack Lymphatics in neck were swollen Revised diagnosis, influenza, which was prevalent at the time Drum membranes both bulging, myringotomy Temperature and pulse remained high Head drawn back by nuchal spastic. Death from bronchopneumonia.

Autopsy.—Autopsy showed no macroscopic or microscopic intracranial abnormality Dr Joseph H Barach searched carefully a number of specimens but failed to find any cellular evidence of inflammation Cultural and microscopic examinations of cerebrospinal fluid were negative.

CASE 12.—*Meningism due to Typhotoxins*

History.—J K., aged 15, male, family history was unknown Both antihelices were absent At orphanage it was said he had had convulsions at the beginning of every severe illness Chronic otorrhea of some years' duration was one of Hutchinson's trio, all of which were present. In the first week of typhoid fever there were headache, active delirium, herpes labialis, vomiting In the second week, stupor and retraction of the head Bilateral Parrott's pupillary sign was present. Temperature ranged between 102 and 104, pulse 100 to 120 In the third week patient died of perforation

Autopsy.—Autopsy failed to show any sign of meningitis There was no excess of cerebrospinal fluid, no engorgement of the intracranial vessels no trace of serous or fibrinous exudate Careful microscopic search by Dr Joseph H Barach failed to show any new connective tissue cells, or evidence of leucocytal migration My diagnosis in this case was meningitis from extension of the old otitic pus focus and I advised immediate operation which erroneous advice was not followed, for reasons unnecessary to mention

CASE 13.—*Meningism from Toxemia, Secondary to the Sealloring of Otitic Pus*

History.—H C, aged 16 months male four months after measles while in apparent health, was suddenly taken ill with vomiting

Symptoms.—Photophobia, opisthotonus neck muscles as rigid as if the vertebræ were ankylosed flexors of legs stiffened at times, but not quite so rigid as the nuchal muscles Child would batter the head with both hands as if suffering severe headache Temperature 104 pulse 100 Slight gastrointestinal trouble, but not enough to account for the symptoms

Operation.—Having excluded other possible causes, Dr W P McCorkle asked me to look at the ears and throat. The nasopharynx was filled with pus, which was streaming from the left Eustachian tube. Both membrana tympanorum were reddened. I incised both of them, a little serum coming from the right, pus from the left.

Next day the meningitic symptoms were much lessened, and in four days the child was well, though some soreness and stiffness of the nuchal muscles persisted for a week, evidently the result of the violent tonic spasm, which at its worst was the most rigid I ever saw The child could have been suspended by hooking the occiput on the edge of a table

CONCLUSIONS

1 Without lesion of the meninges there may be a syndrome comprising many of the diagnostic symptoms of meningitis Before recovery, such cases are often indistinguishable from meningitis

2 The term meningism is, on the whole, the least objectionable that has yet been applied to this syndrome

3 Nosologic independence of the condition will stimulate research

4 According to etiology, these cases may be classified as either reflex, toxemic or irritative

5 In all three classes there are circulatory changes, and in many cases direct action on the cortical and subcortical cells In the toxemic cases the nosotoxins circulating in the blood act as toxic doses of cerebral poisonous drugs do

6 As otologists we have mostly to do with irritative and toxemic cases When any of these forms occur accidentally in a case with middle ear disease, correct diagnosis becomes of the utmost importance

7 Any meningitic symptom may occur, but the erethistic are much more frequent than the depressive The full development of pressure symptoms or paralysis will usually exclude meningism

8 The readiness with which the symptoms of meningism may be quieted by small doses of morphin is a valuable diagnostic point

9 These cases of meningism are distinct from Quincke's "serous meningitis," in that there is no serous trouble

10 In the course of middle-ear disease the symptoms of meningism often demand radical operation for cure, even if the mastoid be yet uninvolved

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THE RADICAL MASTOID OPERATION *

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The radical mastoid operation is employed principally for the permanent cure of intractable chronic purulent otorrhea and consists essentially in opening the mastoid cells, breaking down the upper portion of the posterior osseous meatus, throwing the cells, antrum, epitympanic antrum, tympanum and meatus into one large cavity which must be thoroughly cleansed of all pathologic tissue both soft and osseous and then covered with healthy bony surface with new epithelium by means of [illegible]

*The following article is a condensation of a paper read before the Section on Otology at the Fifty-Fifth Annual Session of the American Medical Association held at Atlantic City June, 1904, and published in full in THE JOURNAL, April 14, 1904. The writer's views have undergone no material change since this article was written.

devised flaps, skin grafts and natural healing processes This procedure is the acme of mastoid surgery, should only be undertaken by an operator of special experience, and is worthy of the continued study of the aural surgeon Perhaps in no space of similar size in the body is operative work fraught with so much danger as when the surgeon undertakes to break down the innermost portion of the osseous meatus and to remove all pathologic products from the remote recesses of the hearing apparatus In and near this minute space are found the sigmoid sinus, the internal carotid artery, the jugular bulb, the cerebrum and cerebellum, the facial nerve, the ossicles, the fenestræ ovalis and rotunda, the cochlea, the semi-circular canals and other portions of the labyrinth, etc All of these anatomic landmarks are to be avoided, and to do this and still perform a thorough and curative operation is a task of no mean caliber and one that may well tax the skill and experience of the aural surgeon It can be well understood that an absolutely accurate knowledge of the anatomy of the parts, obtained from many dissections, and much study of the temporal bone, must be the essential preparatory steps for him who would undertake to do this work, and no one should even then assume the responsibility who has not seen the operation performed many times by competent operators The words "radical operation" are used to express conveniently what was known, and is now frequently referred to as the "Stacke-Schwartze" operation, so called because it combines the good features of both Stacke's and Schwartze's ideas Stacke proposed entering the antrum (after the post-auricular incision had been made) by way of the meatus and tympanum, while Schwartze advocated opening the antrum first and then proceeding to the tympanum and meatus Thus the term "Stacke-Schwartze" operation was evolved, which has finally given place to the more comprehensive word "radical," as it certainly is a procedure radical in nature and intended for the complete cure of a suppurating ear

PRELIMINARY TREATMENT

Before the operation is performed the head should be thoroughly shampooed and cleansed and about one and a half inches of hair bordering the mastoid process should be removed by shaving The ear should be scrupulously cleansed with alcohol and profuse bichlorid irrigation, and the side of the head and neck on which the operation is to be made should be thoroughly scrubbed with brush, soap, alcohol, ether, bichlorid solution, etc, after which a wet bichlorid pack should be placed over the operative area and retained by a bandage. This cleansing process should be repeated after the patient has been anesthetized and is ready for the operation An essential factor in this operation is constant, reliable and intense illumination, for which purpose several devices are satisfactory I prefer a strong electric light attached to the forehead, the eyes being protected by a metal shield, but there are other methods of illumination which, doubtless, are equally satisfactory for lighting up the remote and perplexing areas of the tympanum, antrum etc, without which a satisfactory operation is impossible The head light which I use goes over the head and the electric wire is not directly connected with the forehead pad, which, of course, very materially mitigates the heat of the apparatus This is still further lessened by the lamp being thrust away from the head by a jointed arm that can be bent in any direction On this is used a 16 candle-power lamp, with a bell-shaped aluminum shade, thickly coated on the outside with a black fiber hood which furnishes a brilliant illumination with a minimum amount of heat (Fig 1)

THE INCISION

The first step in the operation is the incision through the soft parts, and this is made by various operators in many ways, some making a long straight incision, others give it a slight curve, while still others make an incision considerably curved around the superior portion of the auricle Whiting and some others make a second incision at about the middle of the first and proceed directly backward for about one inch for the purpose of affording a large operating field

The incision I make is an extensive one (Fig 2), extending from a point a little below the mastoid apex to a point directly over the upper anterior prolongation of the auricle, thus curving it acutely and enabling a large operating field to be exposed I make it as long as possible to avoid the annoyance and delay of having to enlarge the opening from time to time, because fresh outbursts of hemorrhage obscure the bone work and have to be controlled I can see no objection to a long incision, as an extra suture or two will set matters right at the end of the operation, and I believe it is better to commence the incision at the mastoid tip rather than at its base, as there is less danger of plunging the knife into the cervical tissues and producing troublesome hemorrhage

BARING THE FIELD

After the incision has been completed the soft tissues should be pushed away in all directions by a periosteotome (Fig 3*), care being taken to preserve as much periosteum as possible While this is easy of accomplishment at the anterior, superior and posterior portions of the bone where the osseous surface is smooth and but loosely attached to the periosteum, it is quite a different matter at the inferior aspect of the bone over the mastoid tip, where the bone is rough and the periosteum, tendinous tissue, etc, are firmly adherent to the corrugated surface It will here be necessary to cut away the soft tissues with strong, blunt, curved scissors, being careful not to carry the points of the scissors too far from the mastoid apex, as it is possible to cut the facial nerve as it proceeds from the stylo-mastoid foramen to the cervical tissues After the scissors have been thus used a scraping periosteotome should be employed to smooth away from the bone surface the ragged soft tissue that has been left by the scissors, after which the narrow periosteotome should be passed between the osseous and cartilaginous meati to separate them at their posterior, superior and inferior aspects in order that a clear view of the innermost recesses of the meatus and tympanum may be obtained, which is absolutely essential to intelligent operating This can be much facilitated by passing a long narrow strip of gauze through the cartilaginous meatus and bringing it out behind, between the cartilaginous and osseous meati The now doubled gauze strip should then be handed to an assistant, who should gently pull the cartilaginous meatus and auricle forward, thus keeping the former out of the way of the operator's view and surgical procedures It should never be forgotten that a clear view of the osseous meatal margins is necessary in all mastoid operations, as it affords to the surgeon a key to the entire operative area and indicates the point at which chiseling should commence It will be observed that nothing has been said about the suppression of hemorrhage by artery forceps, and this is owing to the fact that I seldom use them in a *mas-*

toid operation, having found that they are in the way and that the moment the self-retaining retractors are placed in position and well expanded, all soft tissue hemorrhage ceases, nevertheless, if a surgeon employs the hand retractors he must, of course, use artery forceps for the control of flap hemorrhage In this article, however, it is assumed that the self-retaining retractors (Fig 4*) are employed and that one pair is placed in the upper angle of the wound and another pair in the lower angle They should be so placed that their teeth are under the periosteum and that the entire extent of the soft flaps is within their grasp The arms should then be separated to their fullest capacity, thus suppressing hemorrhage by traction, and opening up an enormous view (Fig 5) of the bony operative field This renders the horizontal backward incision recommended by Whiting and others unnecessary, unless extensive cerebellar or lateral sinus operative procedures are indicated, which, fortunately, occurs but seldom

The parts should now be cleansed and work on the bony cortex commenced with chisel, mallet (Fig 6), rongeur, curette, etc Chiseling should be commenced in the space limited by a line drawn through the superior roof of the osseous meatus above, and another drawn through the posterior wall of the osseous meatus behind and directly in the region of the spine of the meatus[1] The bone should be cut away (Fig 7), little by little, until the interior of the mastoid cavity and the mastoid antrum are exposed to view, care being taken in the initial work to keep as close to the posterior wall of the meatus as possible, and in searching for the antrum we should proceed from the upper angle of the bone opening, inward, forward and on a line with the course of the external auditory meatus, keeping as close to the latter as possible and below the zygomatic extension, until the antrum is reached The operator will frequently be reminded as the mastoid cavity is approached of the sclerotic or hardened character of the bone It is not so easy to break through the mastoid cortex as it is in acute abscessed conditions, as the protracted osteitis has often produced an ivory-like hardness of the bone and an increasing obliteration and consolidation of the cells, which produces a hardness that will sometimes splinter the strongest chisel

Layer after layer of the cortex may be removed before any evidence of cell structure is manifested, and for this reason the rongeur may not be used so freely as in the acute operation Owing to the osseous sclerosis and cellular obliteration it is not, as a rule, necessary to open the bone as far as the apex, although should well-defined cell development or infection be manifested, as the interior of the bone becomes gradually exposed, complete evisceration of the process should be accomplished In cases where osteosclerosis has existed for some years there is apt to be a gradual pulling forward of the sinus and a consequent encroachment on the normal operative area, which renders it necessary for the surgeon to exercise additional caution, lest he inadvertently break through the sinus wall The same process sometimes lessens the caliber of the antrum and draws it deeper and further into the bone, a possibility which should not be forgotten by the careful surgeon The operator should carefully endeavor to produce a funnel-shaped opening in the bone, with its broad roundish base at the mastoid cortex, and its comparatively pointed apex in the tympanic and antral cavities The outlines of the funnel may be necessarily altered in case of a forward displacement of the sinus, and in case this vein lies so far forward as to render a typical opening of the antrum, etc, more or less difficult or impossible, the antrum should be reached, as advised by Stacke, by breaking down the posterior-superior wall of the bony meatus and progressing backward and inward until the antrum is reached This expedient will, however, be rarely desirable, as such unusual malpositions are, happily, extremely rare

After the funnel-shaped opening has reached the antrum, and a bent probe (Fig 8) can be gently passed from the antrum into the tympanum, and can be felt by another probe passed into the tympanum by way of the bony meatus, the posterior-superior wall of the meatus should be broken down (Fig 9) by chisel, rongeur, etc, under ample and intense illumination From now on, if not before, it is better to stand or sit at the side of the patient, as the succeeding steps of the operation can be performed with more safety, and better power of observation, than if the operator stands at the patient's back

In breaking down the posterior-superior wall of the meatus the aim should be to cut away sufficient bone to leave a somewhat triangular-shaped space with its base at the bony meatal orifice and its apex at the tympanum and antrum This may be accomplished by the chisel or a small Jansen rongeur or by one of the bone crushers that are used by some operators It must not be forgotten that injury to the facial nerve or semi-circular canal may easily accompany this step of the operation, and much care should be exercised in its accomplishment The complete clearing away of the upper portion of the bony meatus without injury to surrounding parts is much facilitated if a small pathway through the bone to the tympanic cavity can be distinctly blazed by some instrument I have found the bone crusher which I use (Fig 10) to be of great service for this purpose Before using it the mastoid cavity, antrum, etc should be thoroughly curetted and cleaned The crusher has not sufficient power and strength to break down the entire thickness of the meatal wall The surgeon should proceed as if expecting to destroy the meatal wall with the chisel and mallet alone and carve away a considerable portion of the bony wall with these instruments

After perhaps one-half of the work has been accomplished the footplate of the crusher should be carefully insinuated through the antrum to the middle ear the handle firmly depressed so as to raise the footplate of the instrument away from the inner tympanic wall, and the arms of the handle forcefully brought together (Fig 11) which will of course crush down the bone contained between the jaws of the instrument The blades are not broad and the channel thus produced is therefore of small dimensions but it is quite sufficient to point the way for further bone destruction which now can be easily and comparatively safely accomplished by chisel, rongeur, curette, etc

1 The absence of characteristic meatal outlines in young children as well as the fact that in the young the antrum is located relatively higher than in those of adult years renders it necessary for us to seek other guides to initiatory chiseling procedures in patients of tender years Such a guide may be found in the bony ridge constituting the posterior root of the zygoma whose lower edge usually is about on a level with the antral roof Chiseling should therefore begin at a point just below the bony ridge and should also be just posterior to a line drawn through the position of the posterior wall of the undeveloped osseous meatal opening Neither should it be forgotten as mentioned recently by Kopitzky in the American Jour of Surg that in the young the tympanic cavity is only separated from the jugular bulb by a very thin plate of bone in which may sometimes be found congenital defects and that therefore operative procedures in the neighborhood of the tympanic floor should be very circumspectly performed.

The length of the posterior-superior meatal wall removed, which forms the base of the triangular wedge, should extend from the floor of the orificial margin of the bony meatus to the superior wall of the meatus, and the two angles of the opening should gradually converge until the inner wall of the tympanum and antrum are reached By adhering to this design the facial nerve as it passes through its sclerotic, petrous casing on its downward course to the stylo-mastoid foramen will escape injury, and the writer does not believe that many of the operative facial paralyses are produced at this point in the operation In cutting away the posterior meatal wall it should be remembered that the facial nerve as it passes through this wall is situated about half an inch from the surface of the mastoid cortex, and that there is, therefore, no danger of touching it until about this depth is reached The posterior meatal wall may, therefore, be cut away clear down to the floor of the meatus at the meatal mouth, which produces a much smoother healing than when a large osseous hump is allowed to remain at this point, on account of the needless fear of cutting the facial nerve The opening should gradually diminish in size until the attic, aditus ad antrum and antrum are reached Great care should be taken as the innermost particles of bone are struck away, a climax which can usually be distinctly recognized by the feel of the chisel and the crushing sound of the bone, as if a cavity had been opened It is extremely easy as this last portion of the bone is broken to send the chisel crashing into the inner wall of the tympanum or aditus, thus rendering injury to the facial nerve, cochlea, semi-circular canals, etc, quite possible. It is for this reason that Stacke devised his protector, which is being used less and less by experienced operators, who prefer to dispense with it as a needless and somewhat dangerous appliance, the necessity for it being overcome by careful and painstaking manipulations

After the last fragment of the bony bridge which separates the tympanum from the antrum has been removed (Fig 12) the surgeon is at the most critical period of the operation, where the most delicate and careful work is to be performed and where the greatest danger of facial paralysis obtains There should again be impressed on the mind of the surgeon the urgent necessity for strong illumination and the desirability of working slowly and deliberately, frequently wiping away the blood and keeping the general and specific topography of the parts well under observation so that important organs may escape injury The lower portion of the meatal remnant should be carefully smoothed and rounded, and the upper portion, together with the upper, outer portion of the tympanic and antrum walls, thoroughly removed so that the attic roof is on a direct line with the upper wall of the bony opening (Fig 13), and can be thoroughly and unobstructedly viewed, examined, curetted and drained

A failure to perform properly this portion of the operation has been the cause of many uncured cases As the facial nerve runs along the upper and inner angle of the tympanum, the removal of the portion of the tympanic and antrum walls just described is accomplished with considerable danger to the nerve, and much caution should be observed in the performance of this necessary step After this is accomplished, if not before, the malleus and incus may be removed by forceps, and the walls of the tympanum, aditus ad antrum, antrum and mastoid cavity carefully explored for necrotic fistulæ, which, if found, should be dealt with in accordance with sound surgical principles, involving a thorough elimination of necrosis, etc, wherever found The chorda tympani nerve is invariably injured during these procedures, producing a temporary numbness and loss of taste in the anterior two-thirds of the tongue on the affected side All granulation tissue, necrosis and cholesteatoma should now be removed with the curette, especial care being taken to free the tympanic cavity of such pathologic accumulations In curetting the middle ear, etc, however, much caution should be observed lest the tegmen be unnecessarily broken, the facial nerve injured, the stapes removed and the fenestra ovalis opened to infection, or the cochlea or semi-circular canals entered Care in curetting when near these danger points should, however, enable the surgeon to avoid injurious traumatisms of this nature It should not be forgotten that Jansen and other leading surgeons are commencing to carry the boundaries of this operation still further than was formerly seriously proposed, and are advocating and practicing the elimination of all labyrinthine necrosis, great care being, of course, taken when possible to avoid injury to the facial nerve From the time the necessary portion of the meatus is being removed to the time when the bone operation is completed it should be the specific occupation of a conscientious assistant constantly to watch for any twitching of the face on the side of the operation, as this phenomenon would probably indicate an interference with the tissues of the facial nerve and would guide the operator to desist from further manipulations in that particular spot

Under good illumination and perhaps with applications of adrenalin and drying with cotton or gauze, the tympanic orifice of the Eustachian tube should be found and curetted, as, if this is not done, granulation tissue usually remains and a mucous secretion from the unclosed tube may become a constant and annoying sequel of the operation This little procedure may be accomplished with a small sharp spoon curette, and Whiting has devised a conical-shaped bur which quickly rims out the orifice I have, however, found his bur overlarge for the purpose and do not like its conical shape, as it may be too energetic in its action, especially when attached to such a strong handle, which not only invites undue force but also obstructs the view of the bur and tube, which should always be kept in sight I, therefore, use a bur with round outlines which seems capable of doing less harm and also one (Fig 14) possessing a straight handle (without a hand crossbar, as in Whiting's) which can be rolled between the fingers when rimming out the tube orifices It is not likely that much force will be employed in using this instrument, and the bur and tube can always be kept clearly in view It should never be forgotten that the osseous Eustachian tube and the internal carotid artery are only separated by a thin shell of bone which may easily be broken in curetting the Eustachian tube, a fact which argues in favor of careful manipulation and in a forward and outward instead of a backward pressure of the curette or bur in the curetting process, as the canal for the artery lies behind that of the Eustachian tube

Having now finished the bone portion of the operation and thrown the meatus, entire tympanic cavity, aditus ad antrum antrum and mastoid cells into one large cavity, which has been thoroughly cleaned and curetted, the surgeon should next turn his attention toward the suturing and thorough and rapid healing of this large cavity The retractors should now be removed and the field of

operation cleaned, after which the cartilaginous meatus should be split and cut, according to the fancy of the operator, in such a manner as to produce flaps by means of which great progress may be made toward the speedy healing of the large bony cavity, and the flaps most in use for the plastic portion of the operation are those of Panse Korner Ballance, etc The specific objects of the procedure are to prevent stricture of the cavity and to employ the upper, lower and posterior portion of the cartilaginous meatus to assist in covering the walls of the osseous cavity and to act as foci for the process of new epidermization The Panse flap may be made by splitting the cartilaginous meatus horizontally from its tympanic end to the concha and then making a cross or "T" incision at the conchal edge which produces two triangular-shaped flaps which may be pushed or sutured back and made to partially cover the exposed bone One of the objections to this as [illegible] plastic procedures resides in the large formed meatus that frequently follows This trouble may be entirely dissipated by the use of two knives which make the cross or "T" incision first and with accuracy thus producing a meatal orifice of exactly the desired shape and size

One kn[illegible] (Fig [illegible] published [illegible] portion [illegible]

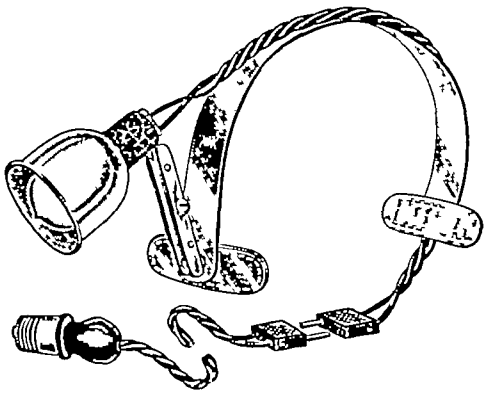

Fig 1.—The electric head light

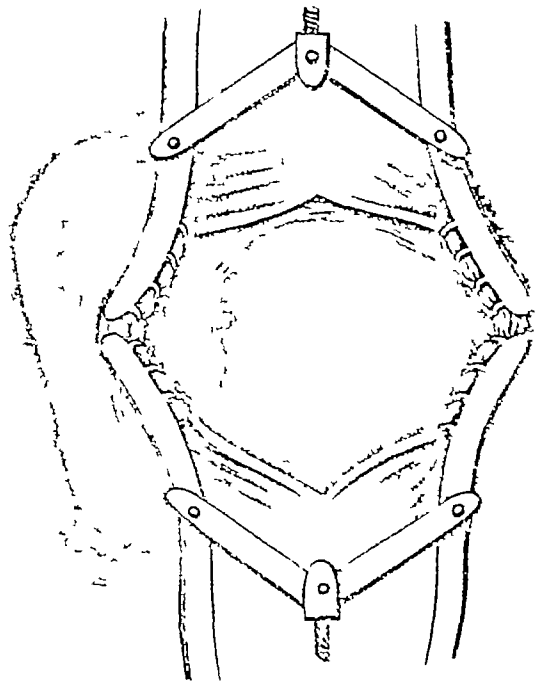

Fig 5.—Showing the retractors in position and the well defined outlines of the osseous meatus

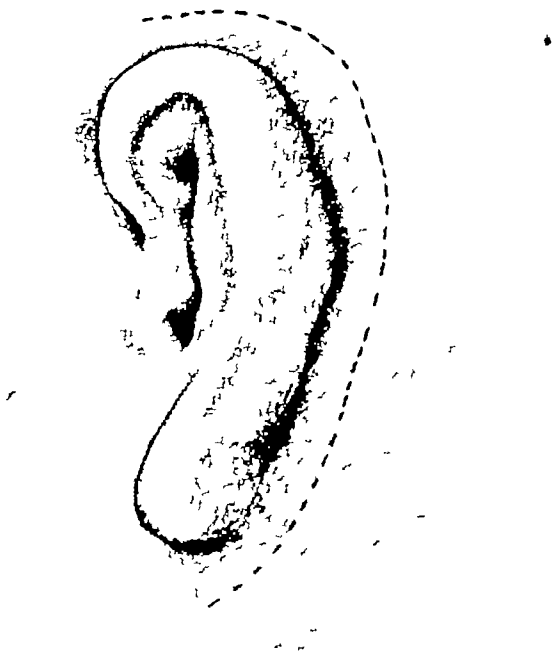

Fig 2.*—The line of incision

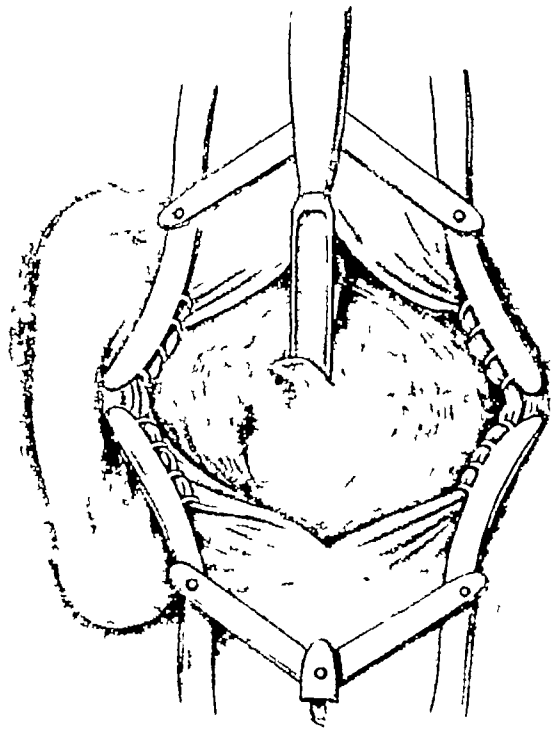

Fig 7.—The grooved chisel of Whiting at work

nearly as possible to the middle edge of the meatus, through to the middle of the meato-conchal rim, where the point reappears and where the blade edges should somewhat enlarge the opening thus made The counter puncture should be made a little back of the meato-conchal edge in order to enlarge the meatal orifice

The knife should now be withdrawn and another and blunt-pointed knife (Fig 17) made to take its place, as the see-saw movement necessary to finish the incision up and down would be likely to produce multiple punctures in the other side of the meatus, provided the use of the pointed lance-shaped knife was continued

The blunt point of this knife renders the subsequent procedures free from such embarrassments, and the fact that the blade convexes forward on the edge enables the surgeon to more effectively complete the remote corners of the incision (Fig 12)

The knife should be carried up as far as desired and then down, always keeping in view the meato-conchal edge and retaining the line of incision a little behind this edge In this way the meatal opening is only enlarged a trifle and the surgeon can be absolutely sure that a constant and non-deforming result will occur The back-

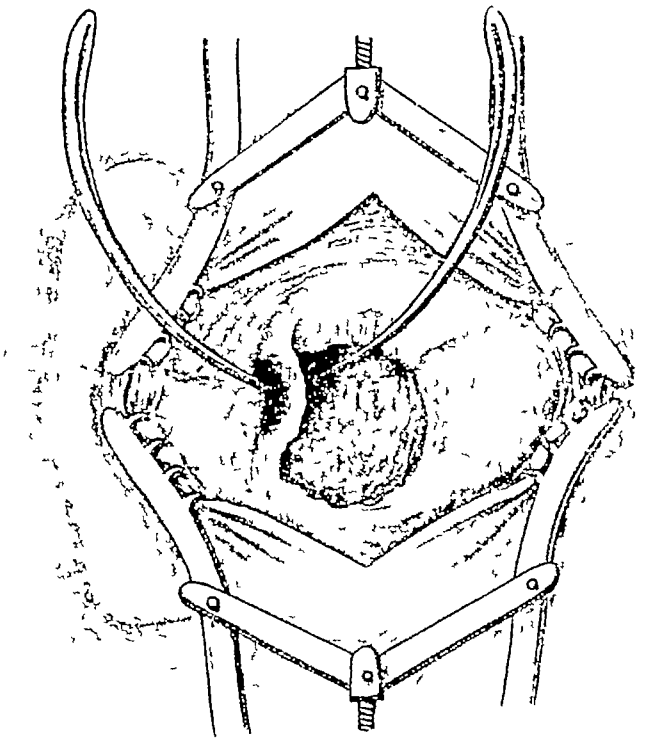

Fig 8.—Showing the funnel shaped opening with one probe passed into the tympanum by way of the antrum and another into the tympanum by way of the meatus

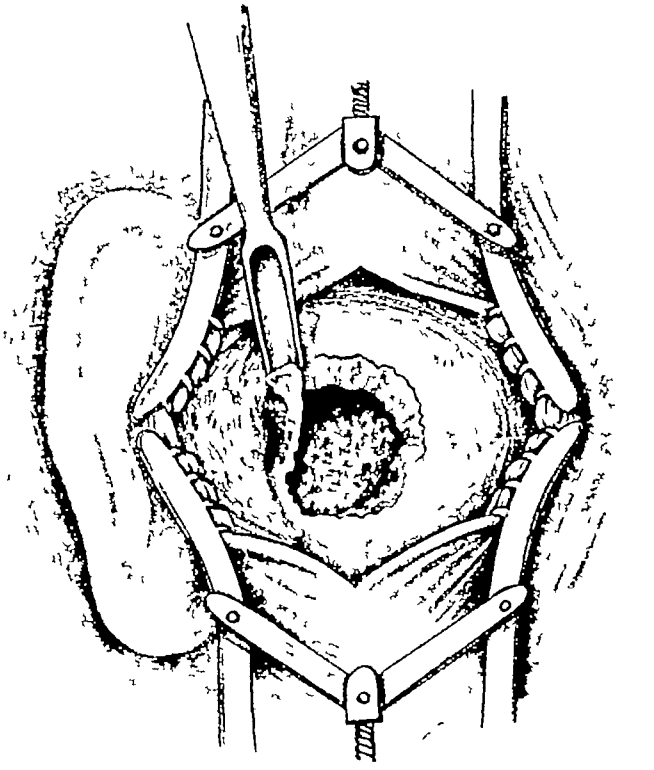

Fig 9.—Commencing to cut away the bone from the upper posterior meatal wall

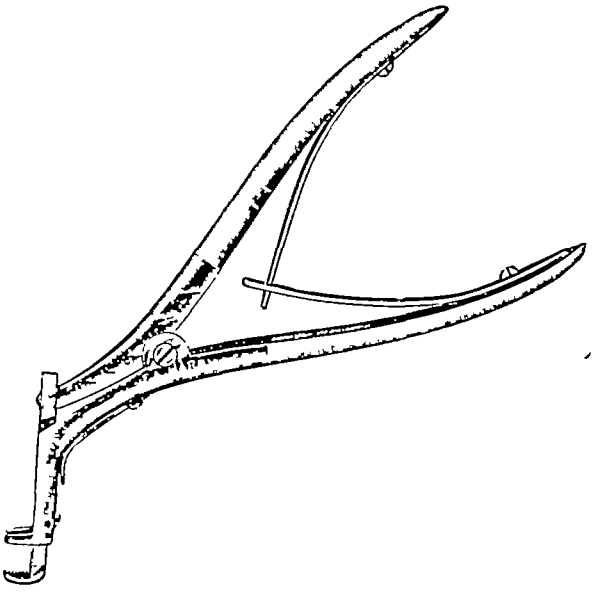

Fig 10.—The bone crusher

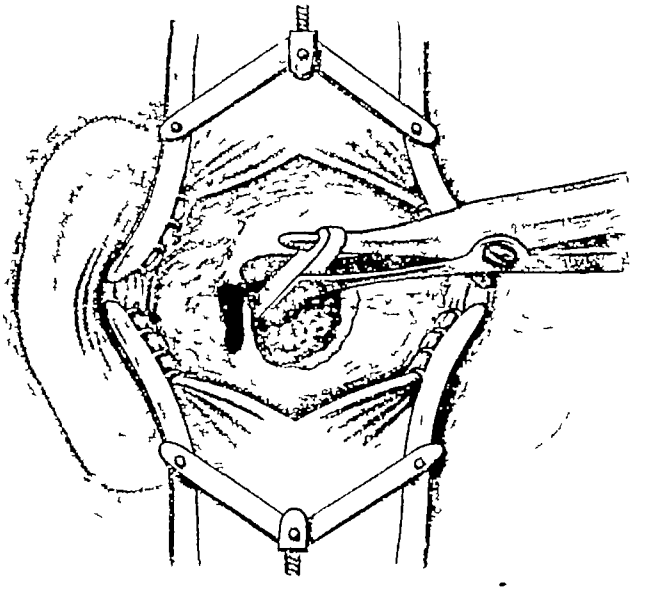

Fig 11.—The bone crusher at work

ward incision along the cartilaginous meatus can now be completed by a divulsor and knife For the purpose of spreading the meatus or of directing the course of the knife some surgeons have used a strong pair of expanded forceps or a grooved director, but for some time I have used what I call a meatal divulsor (Fig 19), which fits into the meatus and spreads it firmly (Fig 20), thus enabling the surgeon to easily and accurately cut the posterior wall of the meatus wherever desired Some surgeons make this incision at the middle of the meatus

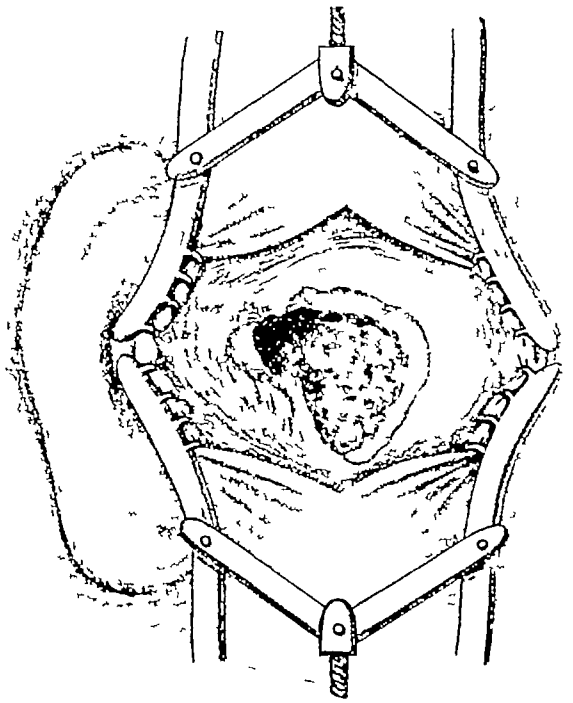

Fig 12 —Showing the completed opening

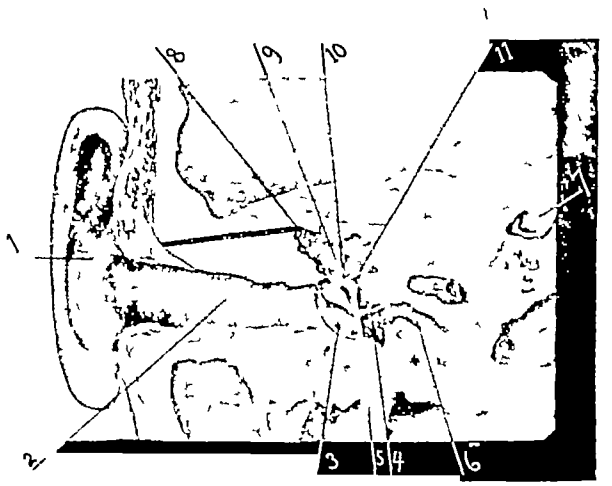

Fig 13 —1 auricle 2 external auditory canal 3 drumhead 4 stapes 5 internal carotid artery 6 eustachian tube 7 internal carotid artery 8 attic 9 malleus 10 incus The broad black line shows that portion of the upper bony meatus which must be removed (After Deaver)

others prefer to make it considerably below the middle, as by this procedure a large upper flap is produced which materially assists in dermatizing the superior wall of the large bony cavity The floor of the new meatus makes much less trouble in proper healing, as the floor of the osseous meatus has not been materially disturbed in the operation The latter method of meatal splitting is probably the better although either may be used

The flaps can be made much more pliable and useful by thinning them of all loose connective and soft tissue, and even some of the cartilaginous tissue by forceps, scissors or knife The flaps should now be turned back and sutured (Fig 21) with catgut to the posterior portion of the anterior lip of the original mastoid incision, or they may be simply forced back and held in position by packing

Some operators advocate endeavoring to fasten the periosteum of the anterior or auricular flap to the periosteum or soft subcutaneous tissue of the posterior flap

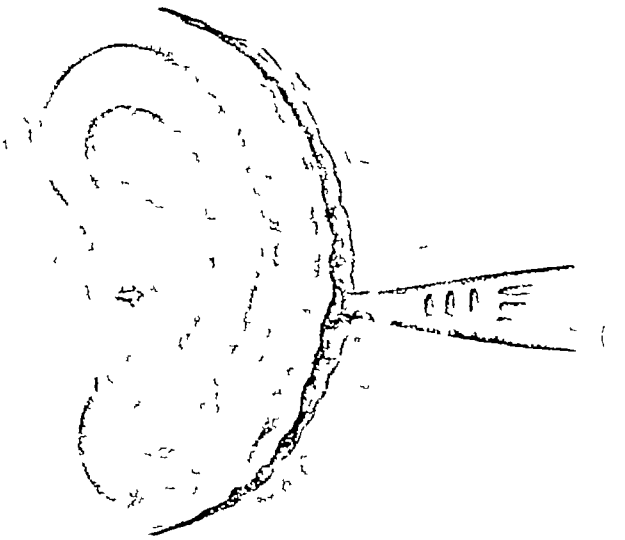

Fig 16 —Showing the lance shaped knife puncturing the edge of the concha

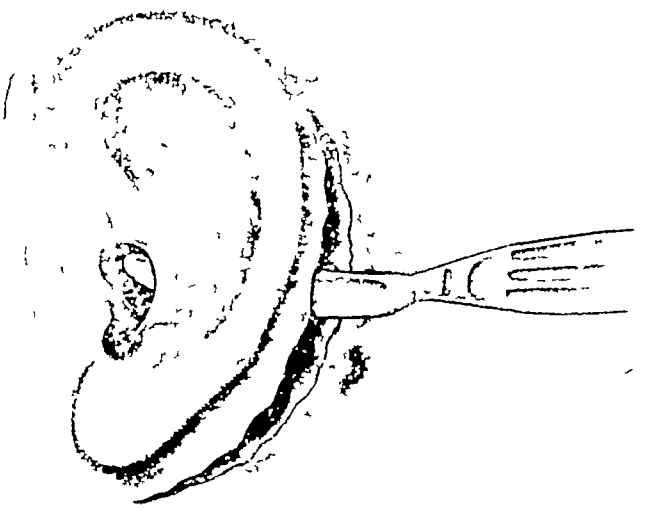

Fig 18 —Shaping the T shaped incision

While this may frequently be accomplished I am convinced that it is a serious mistake, not only because of the tenseness of the tissues produced by the stretching but because it frequently produces in the healing a division of the mastoid cavity into two cavities, one above the stretched false, soft tissue roof, and the other below it The two are usually connected by one or two rounded apertures and the upper cavity not having its bony roof adequately dermatized must of course be a focus of

disease and discharge that prohibits a successful termination of the case. The triangular flaps should therefore be turned back, as it were, and their apices sutured to the soft subcutaneous tissues of the *anterior* mastoid flap.

It must, of course, be evident that in case the horizontal incision through the cartilage is made down as far as possible in order to produce a larger upper flap to help cover the roof of the opening, there will be only one flap (and that one the upper) which is suturable as the lower flap will be so close to the bone as to be unsuturable. The original outside mastoid wound is now

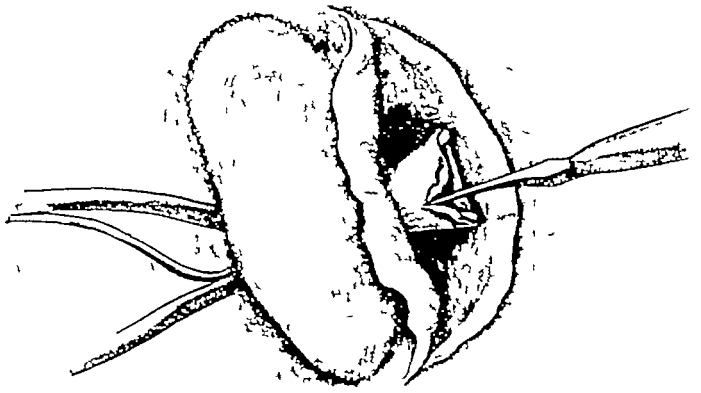

Fig. 20.—Making the horizontal incision through the cartilaginous meatus by means of the divulsor and knife.

drawn together with Michel metal (Figs. 22, 23, 24, 25) or silkworm gut sutures, after which the meatus is irrigated, flushed with some antiseptic solution, dried, cleansed, and firmly packed with 5 per cent. xeroform gauze, which I use exclusively for packing mastoid cavities.

Especial pains should be taken to support the triangular meatal flaps in their new positions by firmly placed gauze packings. Loose gauze is now freely placed over the entire operative area, a soft pliable bandage applied, and the operation is completed.

Some surgeons prefer what is known as the Koerner flap (Fig. 26) for the purpose of inducing epidermis to form over the large osseous area, and this is performed

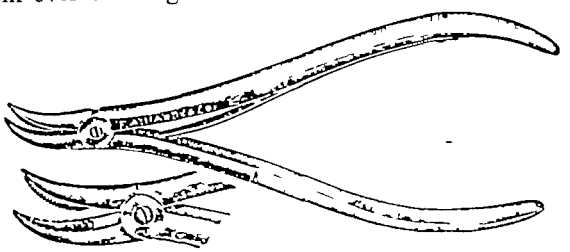

Fig. 24.—Instrument for removing the Michel sutures.

by making two longitudinal incisions in the posterior tissue of the cartilaginous meatus, from its tympanic end to the conchal margin, about one-quarter of an inch apart.

This produces what might be called a tongue flap and should be made as thin as possible by cutting away all superfluous tissue, and possibly by even dissecting out the cartilage. After being thus prepared and the parts cleaned and dried, the tongue flap should be pushed backward until it comes fully in contact with the bone, and then should be held there by packing. This forms quite a large center for epidermis production and often produces a complete and rapid healing of the parts.

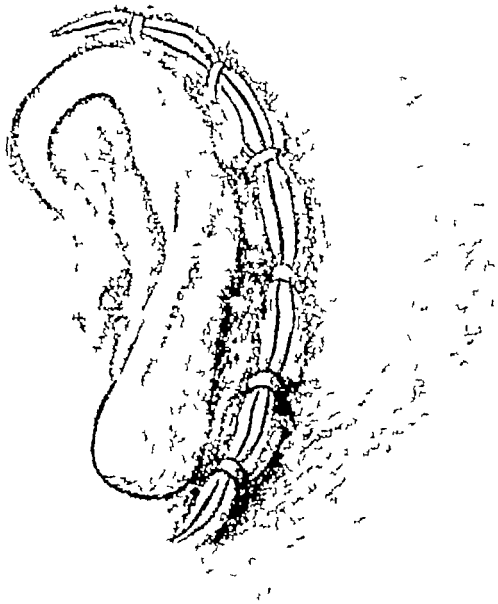

Fig. 25.—Showing the Michel sutures in position.

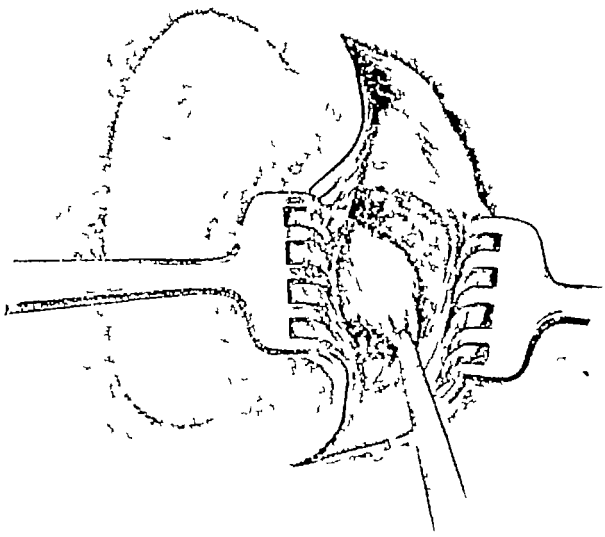

Fig. 26.—The Koerner flap held by forceps.

(To be continued.)

The Free Hospital.—The proper attitude of the hospital to its community, in regard to the admission of patients, is difficult of solution. The greater the diversity of social conditions, and the larger the number of people whose relations with the hospital must be governed by rules and regulations, the more arduous the task. This is what the medical charity faces when it attempts to systematize its activities.—F. B. Young, M.D., in the *Bull. of Am. Acad. of Med.*

SPINA BIFIDA *

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MILWAUKEE, WIS

The object of this paper is to plead for a more extended use of operative means in the treatment of spina bifida, to add another case in which the patient was successfully operated on to those already on record and to elucidate some points in the operative technic of this condition, simplifying the operation as well as rendering it more effective

A child born with one or more vertebræ defective, and with the contents of the spinal canal protruding through that defect is certainly a sorrowful object to thrust on a community Left to its fate, such a child will either succumb early from rupture of the protrusion, or from an ulceration of the tumor and consequent septic spinal meningitis, or, if it survives, it is condemned to a miserable existence with paralyzed rectal and vesical sphincters and various trophic disturbances equally distressing

The case I report is of the latter type, and the results obtained from the treatment instituted were so satisfactory that its presentation before the society was deemed justifiable

Patient—B A, aged 16 a Russian Pole one and one half years in this country referred to me by Dr M M Spitz presented herself for treatment for a congenital swelling on her back and inability to control urination or defecation

History—There was no trace of nervous or mental derangement or of any congenital malformation on either parent's side nor any evidence of syphilis Immediately after birth a mass the size of a hen's egg was noticed in the lumbar region of the patient's spine It increased in size in proportion to her growth The patient was normal in all other respects She was a bright intelligent child and walked when she was 1 year old She had at no time control of either rectum or bladder and the urine dribbling from her continuously gave her an offensive odor although her personal habits were cleanly At times she had retained feces, her bowels remaining constipated for seven or eight days after which she would have an involuntary movement At all other times she had incontinence When she was 7 years old trophic disturbances developed over both buttocks manifested by two large ulcerated areas which have remained open more or less healing part way and breaking open again When she was 10 years old she had a severe attack of cystitis, from which she recovered At 15 she suffered from a milder attack of the same trouble and has had pus in the urine most of the time since but not sufficient to cause any subjective symptoms Since she was 1½ years old a defect was noticed in her left foot and when she was 14 years of age her right foot commenced to show signs of progressive deformity

Examination—The patient was an unusually bright and intelligent girl and well developed An offensive urinary odor emanated from her body Abdominal and thoracic findings were negative In the lumbar region a mass about the size of a medium sized cocoanut was present about 10 cm in diameter It had a broad base was covered by normal skin and had no erosions or discolorations Over each of the nates was an ulcerated surface about the size of the palm of the hand, the outer border of each being surrounded by scar tissue (Fig 1)

The left foot had a complete pes planus the arch being completely sprung the right foot was shorter and broader than the left and had an unusually high arch The entire leg appeared somewhat atrophied compared to the left

Reflexes Both knee jerks were absent, no ankle clonus was present and there was no Babinski sign

Tactile and pain sense as well as temperature sense were entirely absent over the area below the tumor growth, as well as over both buttocks several inches beyond the ulcerated surfaces Pain sense in the lower extremities appeared to be hypersensitive

Fig 1 Patient before operation

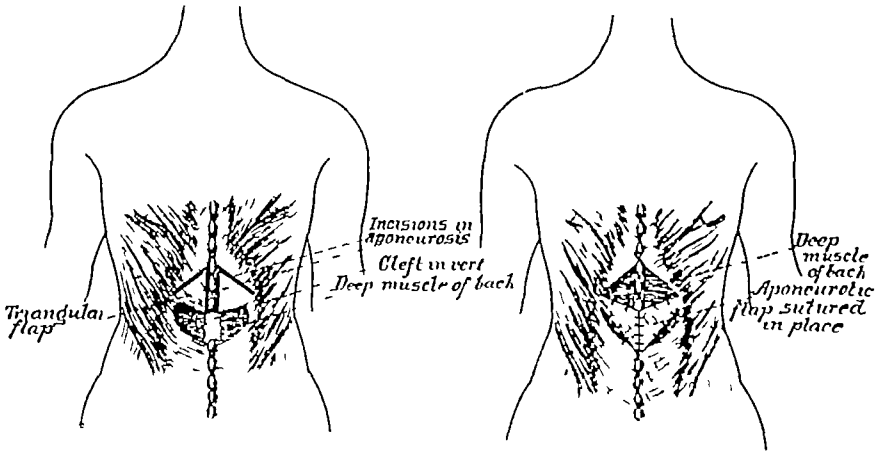

Fig 2 Details of the method of operation

Urine Appearance cloudy sp gr 1011 reaction alkaline albumin and pus were present and large numbers of triple phosphates

Treatment—The patient had been under the care of various surgeons both abroad and in this country She also stayed several months in one of the large hospitals in Europe and although ever willing to submit to any form of treatment offering any possibility of relief, operation was everywhere denied her It appeared to me to be the only possible means of relief and further that operative interference in her case offered a fairly good prognosis both as to immediate and remote results The part of the cord affected in her case was that below the eleventh dorsal vertebra the cauda zone the axons of which are possessed of medullomata and are capable of regeneration if placed in a condition to do so So extensive a degeneration of that portion of the cord had already existed hopes might still be entertained for regeneration with improvement in the girl's condition in time

Operation—The girl was admitted to the hospital and was operated on the following day The cleft was in the area of the first and second lumbar vertebræ the laminæ were wanting The tumor proved to be a mixed lipoma and myeloma

* Read before the Milwaukee County Medical Society Oct 1, 1906

ingocele The meningeal sac was intimately adherent by fibrous bands to the lipomatous mass, and the terminal end of the cord and a network of nerve trunks were firmly adherent to the dorsal portion of the sac These were replaced within the spinal column, the sac removed, as was also the mass of fat, the cleft in the bone covered and the skin over it united

Postoperative History—For the first six days after operation the patient had an even rise of temperature, ranging between 99 8 and 100 2 F, and kept the bed clothes constantly saturated with urine due to the continuous dribbling from the bladder On the third day she had an involuntary movement of the bowels after previous administration of a cathartic This happened several times afterward under similar conditions On the seventh day she was able to retain urine for two hours at a time, and to control its passage, and she declared it was the first time in her life that she experienced the sensation of desire to urinate and control of the same Her rectal trouble also began to improve after that time

Unfortunately, three days later she developed an acute cystitis which delayed her convalescence somewhat It is now a little over two months after the operation, too short a time to expect any regeneration of degenerated nerve tissue to have taken place, yet sufficient improvement is already manifest in her condition to justify fully the operative interference. This is probably due to the removal of the pressure on the cord

She is now able to retain her urine from three to four hours at a time, has the sensation of the desire to urinate and has more than a moderate control over the vesical sphincter, only occasionally does desire to urinate and the relaxation of the vesical sphincter come on so precipitately that the urine is voided before she can betake herself to a suitable place Her rectum fared even better, and she now has a daily evacuation of the bowels under full control and without any artificial aid, only twice did an involuntary evacuation take place during the night while asleep The ulceration over the buttocks healed without any direct treatment a few days after the operation

TECHNIC

Regarding the operative technic of this condition, certain principles must be observed and special care exercised in the application of asepsis and in the emptying of the tumor of its cerebrospinal fluid Directions for guidance in these particulars may be obtained from any text-book on the subject It is in regard to the method of closing the defect in the bone that surgeons are still at variance Merely uniting the skin over the defect by suture as practiced by some does not appear a rational procedure The skin over the tumor is invariably very thin and even ulcerated and can hardly be deemed a sufficient protection Flaps of bone and periosteum from the adjacent vertebræ and the crest of the ilium have been utilized by various surgeons with varied success This procedure has since been abandoned as impracticable It materially complicates the operation, inflicts considerable traumatism to tissues and thereby enhances a predisposition to infection that, above all things, must be avoided

The muscle-flap method of Bayer is the one now commonly practiced and advocated This is executed in the following manner A longitudinal incision through the entire thickness of the muscle is made on either side of the spine at some distance below the cleft, the flaps are dissected off and reversed over the cleft so that the dorsal surface lies anteriorly This necessitates cutting the muscle at right angles to the direction of its fibers which is a disadvantage, and when a large defect is to be covered a considerable depression is left on either side of the back in consequence of the removal of so much muscle tissue I improved on this method by utilizing the aponeurosis of the latissimus dorsi (Fig 2) This muscle arises in part by a strong aponeurosis from the spinous processes of the six inferior dorsal, the lumbar and the sacral vertebræ A longitudinal incision of sufficient length to cover the defect was made over one side of the spinous processes above the cleft, thus freeing a section of the aponeurosis of the latissimus dorsi at its origin on that side From the upper point of the longitudinal incision another longer oblique downward incision was made As the aponeurosis is missing directly at the cleft we have here a free border extending horizontally from the lower point of the longitudinal incision close to the lower point of the oblique incision Thus we have a triangular flap of aponeurosis free at all points except the apex *Using this apex as a center, the entire flap* is rotated downward until it covers the defect in the vertebræ on that side The same procedure is followed on the other side and the two adjacent borders of the flaps are united with chromicized catgut sutures directly over the defect (Fig 2)

This method is very simple and easy of application, requires but a few minutes' time in its performance, does not seriously interfere with the anatomic relations of tissues, and, lastly, affords for the vertebral defect a covering that ranks next to bone in strength and consistency

CONCLUSION

From a study of this case the following facts may be noted

1 Previous to the operation the girl was growing progressively worse

2 Improvement in her condition set in within a few days after the operation and has continued to the present

3 At present a little over two months since the operation she is almost entirely well

The deductions to be made are

1 Continuous pressure on the terminal portion of the spinal cord will entirely suspend the function of such portion, giving rise to a serious train of symptoms

2 Such pressure, though extending over a period of years (16 years in this case), need not necessarily impair the nerve tissue of the cord beyond recovery

3 A speedy restoration of function and alleviation of symptoms may follow the removal of the pressure

Peerless Building

CONJUGATE DEVIATION OF THE EYES AND HEAD AND DISORDERS OF THE ASSOCIATED OCULAR MOVEMENTS

IN TUMORS AND OTHER LESIONS OF THE CEREBRUM

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PHILADELPHIA

(*Concluded from page 1009*)

AUTHOR'S CASES OF CONJUGATE DEVIATION OF THE EYE AND HEAD

CASE 1—McL, a woman, aged 60, was admitted to the Philadelphia General Hospital, March 13, 1905, to the service of Dr Spiller *from the out wards, with a history of a stroke of one* day's duration, in the left side

Examination—The tendon reflexes of the upper limbs seemed to be absent In the lower limbs the patellar and Achilles jerks were increased, more on the left side, and the Babinski sign was present on this side Sensation for touch and pin prick was normal The patient was not wholly unconscious and could respond to questions and would obey commands A sweetish, urinous odor which suggested a uremic condition was present The pupils were equal and larger than normal, and the response

to light was sluggish on both sides She could not be tested for accommodation and convergence, and ocular movements because of her mental condition An occasional tremor was noticed which involved the whole of the left side of the face and the left thumb, this tremor being fine in character The tremor was at times communicated to the lower part of the right side of the face Besides the patient had occasionally a distinct series of convulsive movements which were limited to the left side of the face, the muscles of the face twitching about twice a second, and with this there were twitchings in the muscles of the neck most marked on the left side the head being turned to the left with both eyelids closing and opening synchronously with the other contractions The left thumb was also involved, no movement being apparent in the rest of the hand or of other portions of the body These convulsions lasted about three minutes, after which the patient would take a long breath as though recovering from an attack of epilepsy

When examined by me, on the date of death which was five days after stroke, the patient's head was constantly deviated to the left, the eyes deviating to the *right*, there being a constant horizontal movement from the left to the right, the eyes not going past the median line

Autopsy—No gross lesions were found in the brain. Two depressions were found on the lateral surface of the left cerebral hemisphere which were filled with fluid, one of these depressions occupying the area of Broca, and extending upward into the lower posterior portion of the second left frontal convolution The other area was in the lower part of the intraparietal fissure These areas presented the appearance of a pushing apart of the convolutions without the formation of sclerotic tissue As they were filled with fluid there must have been pressure exerted on the surrounding brain tissue.

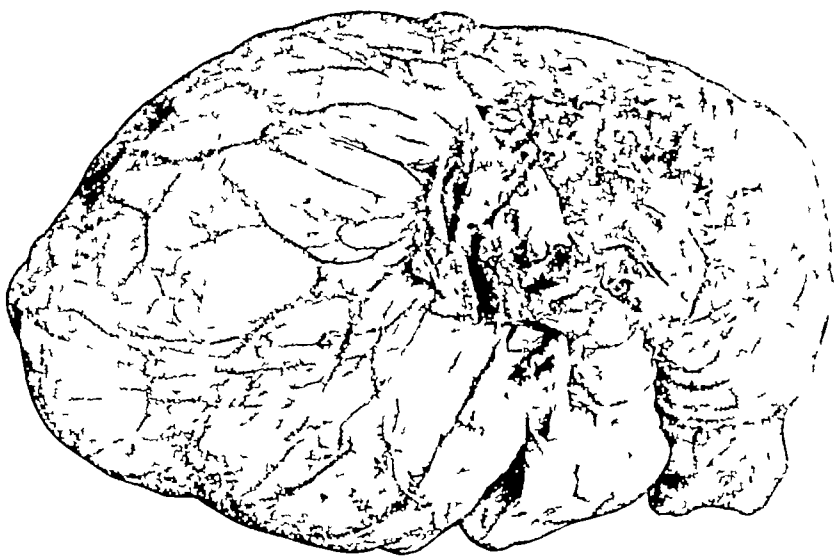

Fig 1—A fibrosarcoma of one occipital lobe causing besides other symptoms paralysis of associated ocular movements, probably as the result of the hemianopsia (Case 7)

CASE 2—W, a man, aged 60, had been in the Wills Eye Hospital because of glaucoma, under the care of Dr S Lewis Ziegler who referred the case to me He had been blind for the past three years While walking down stairs he suddenly became unconscious and fell He was brought back to the wards and had two convulsions, irregular in character He persisted in this comatose condition for two days, during which time the head and eyes were deviated to the left, but there was no paralysis noticeable in any of the limbs

Examination—When examined by me two days after his fall the head and eyes were strongly deviated to the left the eyeballs being in a constant to and fro lateral movement, the movement being always from the right to the left and never past the median line There was a distinct weakness of the lower part of the right face and to a less degree of the right upper limb The right lower limb was very little if at all involved. Sensation seemed normal, the tendon reflexes on the right side were increased and the Babinski response on this side was obtained. Forcible deviation of the head to the right would cause immediate movement of the head back to the left

Clinical History—The patient soon became conscious and it was then found that he was motor aphasic, and that he could only answer "Yes, Sir" and the word "Norah" The paresis of the right limb disappeared almost completely and nothing remained but the weakness in the right lower face, this being also less than it had been at first The deviation of the head was not so marked, but the deviation of the eyeballs was still as marked as ever He was then admitted to the University Hospital Examination seven days after his attack showed almost complete disappearance of the paresis on the right side, including the face The deviation of the head was entirely absent, but the eyeballs still had a tendency to deviate to the left Voluntary associated ocular movements were well performed upward, downward and to the left, but to the right he could not bring his eyeballs more than just a little past the median line Motor aphasia still persisted It was not until about seventeen days after his attack that he was able to bring his eyeballs completely to the right in associated ocular movements The motor aphasia was still somewhat present

Diagnosis—The patient evidently had a hemorrhage in Broca's convolution on the right side, this involving partially the center for movements of the head, and of the eyes in the adjoining posterior portion of the second frontal convolution

CASE 3—McJ, a woman, aged 62 was admitted to the nervous wards of the Philadelphia General Hospital, March 28, 1906, in the service of Dr Spiller

Examination—She was mentally clear and answered questions logically and would obey commands well She stated that she had had intense headache, some dizziness, nausea and vomiting for the previous three days While lying passively in bed the head was deviated to the right and she was unable to turn it to the left On a forcible attempt to straighten her head the resistance to the movement was very noticeable It could, however, be forcibly turned completely to the other side, but would immediately turn to the right. The eyes were also deviated constantly to the right The patient unquestionably had right homonymous hemianopsia, as she was able to recognize all objects properly on her right side but failed utterly on her left The pupils were unequal and seemed to react slowly to light Efforts at convergence in looking to the right could only be tested, and when this was done convergence was normal

During my examination which lasted about three fourths of an hour, the patient had five convulsions which would start as follows There was first a slow turning of the head from the right to the left at the same time or perhaps a second later there was an upward movement of the left arm as if the hand was held in gesticulation the head was now held in violent tonic contraction to the left and the face was drawn to the left, the right face drooping the eyeballs were in constant contraction to the left and were jerked to and fro violently to the left outer canthus Almost immediately after the movement of the left upper limb the right upper limb was raised and the body was forcibly turned to the left The tonic contraction of the left hand and face were now succeeded by a clonic contracture of all the limbs of the body During the tonic contracture the left angle of the mouth was violently drawn upward, the eyelids were alternately opened and closed on both sides but about three times as rapidly on the left side as on the right The convulsions sometimes would start in the left side of the face or again would start simultaneously in the left side of the face and left arm or the right limb In the majority of instances however, the convulsion would start with movements of the left face or the left hand

T[illegible] comp[illegible] flaccid in

character The reflexes were increased on both sides, more on the left The Babinski reflex was present on this side and not on the right Sensation for all forms was lost completely over the left side The sense of position was also lost in the left upper and lower limbs and she was unable to recognize any object placed in the left hand

She was able to look upward and downward with both eyes equally and well She could look to the right and when this was done the right eyeball was not brought to the outer canthus by one fourth inch, the left eyeball, however, was fully deviated to the internal canthus Associated ocular movements to the left were impossible

Patient died three days after her admission to the hospital

Autopsy—Fracture of the cranial bone was found starting at about one half inch above the ear and extending downward almost to the foramen magnum The line of another fracture extended from a point between the foramen magnum directly backward to the right of the lateral sinus Extensive hemorrhages were found occupying the right frontal pole, this extending in its posterior aspect to the foot of the second frontal convolution and lower part of the precentral convolution Small hemorrhages were also found involving the right angular gyrus and the right occipital point Horizontal section of the brain showed the hemorrhage to be cortical in all these points and not involving the white substance in any portion

CASE 4.—S, adult male, was admitted to Philadelphia General Hospital, Dec 9, 1902, to the service of Dr Mills

Nothing could be obtained of his past history as he was admitted in a stuporous condition and his identity was unknown A complete left hemiplegia was present The tendon reflexes were exaggerated, more so on the left side The

Fig 2—Area of softening involving the caudate nucleus and lenticular nucleus with a fresh hemorrhage underneath the angular gyrus Clinically hemiplegia with temporary hemianesthesia and hemianopsia was demonstrated The two latter symptoms were probably due to the shock of the hemorrhage (Case 16)

Babinski reflex was present on this side He apparently had a complete left hemiplegia with left hemianesthesia and left hemianopsia The pupils did not react to light or accommodation on either side Patient was unable to turn his eyes in associated movements to the right He died three days after his stroke

Autopsy—Several large hemorrhages were found involving the greater portion of the right parietal convolution and extending forward beyond the Rolandic fissure into the back part of the frontal lobe and posteriorly in the occipital lobe

CASE 5—B, male, aged 60, a weaver, was admitted to the nervous wards of the Philadelphia General Hospital, in the service of Dr Spiller, April 4, 1903

History—He had syphilis when 30, but otherwise his past history was of no importance When admitted to the hospital he complained of weakness and stiffness in both lower limbs which he had had for the previous six months, and also some difficulty in talking and swallowing There was no history of apoplectic attacks

Examination—His gait was stiff, his steps were short station was normal with eyes open and closed, speech was bulbar, it being dull monotonous and indistinct. He had dribbling of saliva, difficulty in chewing and eating and would even choke There was no apparent weakness in any of the cranial nerves The lower portion of the face seemed atrophied, but no tremors were present either here or in the tongue The upper and lower limbs were weak and spastic, especially the left, all the tendon reflexes on both sides were exaggerated, especially on the left Ankle clonus was present on both sides and the Babinski reflex was typical on the left and uncertain on the right Sensation was normal for all forms everywhere Some atrophy was present on both sides in the thenar and hypothenar eminences, especially on the left side Some general atrophy was also present

Diagnosis—The patient was regarded as a questionable case of bulbar palsy, the slow progress and the absence of more involvement of the cranial nerves and of fibrillary tremors, making the diagnosis of pseudobulbar palsy possible

Clinical History—The condition of the patient gradually became worse, the bulbar symptoms becoming more marked Two days before his death he suddenly became unconscious and had convulsions, clonic in character, these being limited entirely to the right side When examined by Dr Spiller (who made the following observations) the patient was found in an entirely unconscious condition, paying no attention when his name was called, breathing was stertorous and the right cheek was puffed out as though that side of the face was paralyzed The right upper and lower limb was raised, and dropped like a flail, and irritation of these parts did not elicit any movement The reflexes were more exaggerated on the right side and this side was more spastic The Babinski response was prompt on each side The head and eyes were deviated to the left. If the head was forcibly turned to the right it would soon forcibly turn back to the left Slight irregular lateral jerkings of the eyeballs were present. The right pupil was larger than the left and the reaction of the iris to the light was slightly present The deviation of the head and eyes persisted until the following day, when the patient died

Autopsy—The case proved to be one of pseudobulbar palsy, as a scar of an old hemorrhage was found in each lenticular nucleus Besides a recent hemorrhage was found in the left occipito temporal region extending to the cortex This hemorrhage was in the posterior portion of the first and second left temporal convolutions and just below the angular gyrus The area involved was 4 cm deep and 1 2 cm in its greatest width

CASE 6—G, a woman, aged 80, a domestic, was admitted to the nervous wards of the Philadelphia General Hospital, Oct 12, 1905, in the service of Dr Mills Nothing was known either of the family or of past history She had a history of suddenly developing numbness of the left hand, followed by pain and convulsions limited to the left face and hand and weakness in these parts

Examination—When examined by Dr McConnell, the patient showed a distinct weakness of the lower part of the left face and of the left upper limb, this weakness in the limb being more marked in the distal parts The other limbs were not involved Sensation for touch and pain were normal everywhere The reflexes in the left upper limb were exaggerated but the other parts were normal During the examination the left side of the face and the left hand were the seat of intermittent convulsive movements the head being drawn somewhat to the left and the left angle of the mouth upward and outward closing both eyelids and wrinkling the brow, with dilatation of the left nostril The left platysma muscle was also in contraction There was no movement of the eyeballs during the convulsion (Dr McConnell was positive of this, for he observed her especially with this purpose in view) The convulsion would last for two minutes and did not involve any other portion of the body The patient was perfectly clear in mentality during the attacks and would answer questions and obey commands directly after the convulsions were over

Examination of the eyes showed the pupils to be moderately dilated and round the response to light and accommodation being normal The left ocular and palpebral conjunctivæ were greatly inflamed Associated ocular movements upward and to the left were greatly impaired being in fact almost entirely lost, the loss of upward movement being more marked in the

right than in the left eye The paralysis of associated ocular movements persisted until her death, which occurred four days after her admission to the wards

Autopsy—An area of softening was found in the middle of the right precentral gyrus, this softening extending downward as far as and not involving any of the frontal convolutions A fresh hemorrhage was found in the posterior portion of the occipital cortex, this hemorrhage being 2 5 cm from the occipital bone. It was 2 5 cm wide and 2 cm deep, extending into the white matter and possibly involved the outer part of the optic radiations The hemorrhage was posterior and inferior to the angular gyrus and very close to it

Dr Mills recorded the complete history of this important case before the American Neurological Association, in Boston, June 4 and 5, 1906, in a paper entitled, "Focal Encephalitis"

CASE 7—McC, a woman, about 50, a patient of Dr Crothers, of Chester, was seen in consultation by Dr Mills and myself

History—Some notes were obtained from one of her relatives who had been with her constantly for a year or two This relative stated that the first symptom of which the patient complained were flashes of light which she always saw from the left side Later the niece observed that she would stumble against objects which were placed on the left, as the left side of the door through which she was passing This tendency grew worse as time went on and probably indicated a left homonymous hemianopsia She began to suffer from agonizing headaches, and still later developed nausea and vomiting It was not until nearly a year after the visual symptoms appeared that she began to develop weakness in the left arm and leg

Examination—When she first came under observation patient had a left hemiplegia, the limbs being somewhat contracted The tendon reflexes were prompt on both sides, but more so on the left, and the Babinski response was present on this side The patient's mentality was not of the best and it was impossible to tell the state of the sensation. The associated ocular movements were normal to the right and downwards, upward movements were limited, but associated ocular movement to the left was impossible. The pupils were equal and the iritic reflexes were normal

Eye examination by Dr C I Stiteler showed vision, O D, 5/9, in O S, 5/12 The pupils reacted normally, the media in O D was slightly hazy and the outline of the nerve head could clearly be seen only at the upper temporal border, the rest of the nerve being very indistinct and somewhat swollen, especially at the lower border where the margin could not be seen The retinal vessels were enlarged In O S, the media was slightly hazy, the nerve head was normal

Operation—There were besides, intense headaches, and some nausea and vomiting Because of these symptoms of brain tumor an operation was decided on in the motor area After the operation the patient became considerably better and lived comfortably for two months In this period homonymous hemianopsia (left lateral) was clearly apparent. Dr Crothers, under whose care she was stated that she would never voluntarily look to the left, but that she could look upward, downward and to the right normally, but that towards the last he was able to get her, after violent effort, to look to the right.

Autopsy—A large tumor was found filling up the whole of the right occipital lobe, extending very nearly to the surface but not breaking into the cortex The convolutions and fissures over this tumor were much flattened The tumor extended to the posterior part of the corpus callosum and displaced forward the structures anterior to this Just at the anterior border of the tumor the wound made by the surgeon at the time of the operation could be found The angular and supra marginal gyri were involved in the tumor

CASE 8—H, woman aged 60, a cook, was admitted to the Philadelphia General Hospital, Dec 15, 1904, in the service of Dr Mills

History—Five days before admission to the hospital the patient suddenly became unconscious and developed a complete right hemiplegia

Examination—She was unconscious on admission, the paralysis on the right side was complete and flaccid in character The reflexes on each side were diminished but the Babinski reflex was present on the right The patient soon recovered consciousness and was able to obey commands, sensation was not disturbed and there was no hemianopsia Motor aphasia was well marked The following notes were made by Dr Pemberton, the resident physician "The right pupil is contracted and apparently immobile to light. The left pupil is dilated and fixed The media of both eyes is very cloudy, especially the left, which shows a cataract and a marked arcus senilis, accommodation seems to be impossible The patient looks straight ahead and she cannot apparently move her eyes in any direction when told to do so, although she evidently understands commands and makes an effort to obey, as shown by slight turning of the head."

The patient died nineteen days after the appearance of the apoplectic symptoms

Autopsy—A thrombus of the left middle cerebral artery was found with softening of the brain in the precentral, postcentral and the whole of the parietal convolutions, that is, in the area supplied by the middle cerebral artery The softening extended to the lenticular nucleus, but did not invade it, as the thrombus was beyond the point where the arteries to the basilar ganglia arise The posterior portion of the second frontal convolution was not involved

CASE 9—H., a woman, aged 70, was admitted to Philadelphia General Hospital, June 23, 1903, to the service of Dr Spiller, with a history of right hemiplegia, one day in duration

Examination—The paralysis on the right side was complete and flaccid in character The patient was stuporous and could not be aroused The reflexes were diminished, this being more so on the paralyzed side The Babinski reflex was obtained on the right side, not on the left Pin prick seemed to be perceived on the paralyzed side, as shown by the movements of the opposing limbs There was decided conjugate deviation of the head and eyes to the left. When the tongue was protruded it was also protruded to the left

Patient died eight days after her stroke

Autopsy—A recent hemorrhage was found in the left optic thalamus, destroying the greater part of the thalamus and extending into the posterior limb of the left internal capsule, but apparently not invading the lenticular nucleus or involving the optic radiations

CASE 10—H., a tailor, aged 80, was admitted to Philadelphia General Hospital March 6, 1906, from the out wards, to the service of Dr Spiller

Examination—A complete right hemiplegia was present, the paralysis being flaccid in type The tendon reflexes were increased on the right side and the Babinski response was prompt On the left side the reflexes were normal Pin prick was not recognized on the right side, but on the left side any irritation would cause prompt movement It was impossible to tell whether hemianopsia was present There was also incontinence of urine and feces The patient's head was deviated to the left and when it was forcibly turned to the right or to the median line it was immediately turned back to the left There was also a conjugate deviation of the eyes to the left.

Examination two days later showed practically the same condition, the deviation of the head and eyes being as marked as when examined the first time There were present besides constant horizontal movements of the eye, this being perceived with the eyes open, and also when they were shut, the movements being transmitted to the lids These lateral movements were also to the left. Irregular and jerking movements were also present in the left limbs Examintion two days after this and six days after his stroke, still denoted the same condition the head not being deviated so strongly The deviation of the eyes however, was as marked as ever Any movements of the head would always be to the left and never to the right no matter where the irritation was made The pupils were small and equal the light reaction was normal All movements of the eyeballs were to the left and not to the right The patient died seven days after his stroke

Autopsy—A recent large hemorrhage was found filling up the posterior horn and descending horn of the left lateral ventricle but not into the anterior horn and also involving a large part of the lenticular nucleus doubtless disturbing the function of the left optic radiations and involving also the posterior limb of the internal capsule and the optic thalamus

CASE 11.—D., a man, aged 52 with a history of syphilis and alcoholism, was admitted to the nervous wards of the Philadelphia General Hospital, Sept. 17, 1902, in the service of Dr. C. S. Potts, to whom I am indebted for the material of this case. A day before his admission the patient had an apoplectic attack, with a resulting left hemiplegia.

Examination.—The paralysis was complete and flaccid, the tendon reflexes were not exaggerated on either side, but the Babinski response was obtained on the left side. A hypesthesia for touch and pain was apparently present in the paralyzed side. The patient had conjugate deviation of the eyes to the right, with inability to turn the eyes to the left.

Autopsy.—An area of softening was found in the lenticular nucleus of the right side, and extending into the posterior limb of the internal capsule, but not invading the optic radiations.

CASE 12.—R., a man, aged 77, was admitted to the nervous wards of the Philadelphia General Hospital, July 19, 1904, in the service of Dr. Spiller.

History.—A sudden attack of unconsciousness the day before, resulting in a left hemiplegia.

Examination.—On the following day examination showed a complete left hemiplegia, the paralysis being flaccid. The tendon reflexes were lost on the paralyzed side and were diminished on the sound side. The Babinski response was obtained on the left side. Pin prick was not recognized at any portion of the left side, but was promptly recognized on the right side. The patient was not totally unconscious, as he would obey commands, as sticking out his tongue and lifting up his limbs of his sound side. There was also present incontinence of urine and feces. The eyes were distinctly deviated to the right, but there was no deviation of the head. It was impossible to tell if hemianopsia was present.

The patient died six days after his stroke.

Autopsy.—A large hemorrhage was found destroying the posterior portion of the right lenticular nucleus, extending backward beyond the nucleus almost to the angular gyrus and destroying the posterior part of the posterior limb of the internal capsule. This large hemorrhage did not involve the cortex at any point, although in one part minute hemorrhages were found in a portion of the cortex about the island of Reil.

CASE 13.—S., a man, aged 51, was admitted to the Philadelphia General Hospital, Sept. 21, 1903, into the service of Dr. Mills.

History.—He had been admitted to the hospital several years previously with a history of right hemiplegia, from which he partially recovered.

After being in the hospital for two years he suddenly had an attack of unconsciousness. The resident physician, Dr. Maier, found him in a stuporous condition, the right arm and leg being completely paralyzed and the right face drooping. Some spasticity was present on this side and the reflexes were exaggerated. The head was not deviated to either side, the eyes were turned up and oscillated slightly from the right to the left. He died two days afterwards.

Autopsy.—A lesion was found in the left lenticular nucleus not extending apparently into the internal capsule, and reaching and invading the claustrum, extreme capsule and not reaching the cortex. The lesion must have involved the fibers underneath the angular gyrus.

CASE 14.—A. was an old right hemiplegic, who had for a long time been in the nervous wards of the University Hospital. His previous records were lost.

One morning he suddenly became unconscious and had convulsions, which were limited to the left upper and lower limbs and the left side of the face. The eyes were turned in conjugate deviation to the right. Both upper and lower limbs were flaccid, there being, however, more tonicity in the left side. The tendon reflexes were lost in all the limbs but the Babinski response was distinct on the right side. The patient died the same day.

Autopsy.—The ventricles were found to be considerably dilated and the scar of an old cyst was found in the external portion of the left lenticular nucleus and involving the extreme capsule.

CASE 15.—C., a woman, was admitted to the nervous wards of the Philadelphia General Hospital, July 12, 1904, into the service of Dr. Spiller.

History.—The patient then had a paresis on the left side of the body. Feb. 22, 1905, she suddenly became paralyzed, about seven months after her first stroke.

At this time Dr. Spiller made the following dictation: "The patient is in a deep stupor and is unable to understand anything said to her. The eyeballs are deviated to the right and there are frequent irregular jerky movements to the right, the left edge of the cornea going but very little beyond the median point of the palpebral fissure during these movements. These clonic movements of the eyeballs are suggestive of an irritation of the left cortical center of the ocular muscles."

When she was seen by Dr. Pemberton, the resident physician, somewhat previously, but on the same day, the eyes were turned to the left, and there were no jerky movements of the eyeballs. She had therefore conjugate deviation of the eyes to the left, but this was at the time when there was no irritation of the eye muscles, and therefore would seem to indicate that she was looking at her lesion. The head was not stiff and remained where placed; there was also a slight tendency of the eyeballs to be drawn upward as well as to the right. The pupils were dilated, and equally so, and did not respond to light. Occasionally an involuntary jerking of the left upper limb was observed. Both upper and lower limbs were flexed and the reflexes were diminished, the left more than the right. Babinski response was present on the left but not on the right. She died the following day.

Diagnosis.—Left hemiplegia.

Autopsy.—A limited area of sclerosis of the anterior portion of the right second frontal convolution was noted. There was also a cyst in the anterior portion of the left lenticular nucleus. An area of softening in the right frontal lobe at the frontal point was found. The lateral ventricles were also somewhat dilated.

CASE 16.—C., a woman, aged 35, was admitted to the Philadelphia General Hospital, Dec. 1, 1905, to the service of Dr. Hirst.

History.—Patient was delivered of a child four weeks previously, since which time she had been having a temperature and had apparently been septic. Two days before her admission she suddenly fell, became unconscious, and has not been able to speak since.

Examination.—She was examined five days after her admission by Dr. McConnell and myself. The patient then had a complete right hemiplegia, the limbs on the paralyzed side being spastic and contracted in the usual hemiplegic position, the reflexes were exaggerated on both sides, the right more than the left and the Babinski response was present on this side. The patient was not unconscious and would obey commands. The head and eyes had been deviated since her admission constantly to the left. Pin prick or touch on the right side could not be recognized anywhere, but on the left side sensation was promptly recognized. Objects were not recognized in the right visual fields of either eye, as was demonstrated by the feeding cup and other tests, therefore right homonymous hemianopsia was present. The patient was aphasic, but could understand questions and would nod responses. The right masseter muscle was in a constant state of contraction, causing the right jaw to be locked. She was able to turn her eyeballs upward, downward, and to the left, but could not turn them to the right. When examined a day after this the patient could turn her eyes a little to the right, but not normally so. She died a few days afterwards as the result of a double pneumonia.

Autopsy.—An area of red softening was found, involving the left caudate and the left lenticular nucleus. A small hemorrhage was also found in the cortex of the upper portion of the first temporal convolution just below and anterior to the angular gyrus.

DISCUSSION

DR. CHARLES K. MILLS, Philadelphia, agreed almost, although not entirely, with Dr. Weisenburg's conclusions. He does not believe that the only cortical ocular center is situated in the posterior portions of the second and third frontal convolutions. That the only actively functioning center in the whole human being is situated in this region can be accepted as a practical fact based on clinical and pathologic observations. Dr. Mills believes that there is a motor region

in the lower animals and in man for every cortical region of the special senses For practical purposes of diagnosis, however, the only one that claims attention in the human being is the musculocutaneous or main motor region. The human being has an auditory motor region, a visuo motor region, etc As shown by the investigations of Flechsig and the experiments of Grünbaum and Sherrington, Schäfer and others, motor centers are situated along the calcarine and parieto occipital fissures and the posterior extremity of the intraparietal fissure. These centers may be largely in abeyance in the human being, their place having been taken as the result of racial and individual evolution by the more frequently employed oculomotor centers of the main motor area Dr Weisenburg, he said, has not laid particular stress on what appears to be a matter of much clinical importance, namely, the difference between the results caused by a lesion of the oculomotor cortical center of one side, and lesions occurring simultaneously or successively in these centers on both sides of the brain The oculomotor centers of one side are probably effective in the control of movements of both sides Therefore, lesions of one side may fail to give persisting symptoms Dr Mills said that the view advocated by Dr Weisenburg is probably correct, namely, that the nuclei of the nerves supplying the internal recti and those supplying the external recti of both sides are connected by special tracts

DR. W G SPILLER, Philadelphia, considers that perhaps one of the most important conclusions stated by Dr Weisenburg in his report of the sixteen cases with necropsy, is that conjugate deviation of the head and eyes can not be used as a clinical sign of lesions of any particular part of the brain Dr Weisenburg's views resemble those entertained by certain neurologists in regard to word seeing By some it is held that the center for word seeing is in the angular gyrus of the left side, by others that the loss of word seeing produced by a lesion in this gyrus is caused by a destruction of the fibers passing beneath this gyrus to the first temporal convolution The latter resembles the view advanced by Dr Weisenburg, viz., that there is no definite center in the angular gyrus for conjugate movement of the head, and that when deviation occurs from a lesion here, it is the result of destruction of the fibers beneath the cortex Numerous observations are needed to establish this view Dr Spiller agrees with Dr Weisenburg that there are probably separate centers for the movements of the head and eyes In some cases there is deviation of the head without conjugate deviation of the eyes, while in other cases the two may exist together and not infrequently one will disappear without the other Dr Weisenburg's idea that there may be a latent deviation in every case of apoplexy with hemiplegia, shown by the inability of the patient to look toward the paralyzed side, is interesting, Dr Spiller said, but difficult to prove, as usually consciousness is lost and it is impossible to obtain voluntary movement of the eyes Cases occur, however in which this examination may be made

Dr Spiller cautioned against the improper estimation of incoördinate movements of the eyeballs present shortly before death Such movements at that time have little diagnostic value In his paper, read before the American Neurological Association, in 1905, on "Paralysis of Associated Ocular Movements," he made no reference to congenital cases, or to experimental work on animals, but referred only to the condition as acquired by man In that paper he expressed the view that persistent paralysis of associated upward movement of the eyeballs is due to a lesion near the oculomotor center If there could be a lesion in each cortical center for the movements of the eyes, they might together produce associated upward paralysis, but lesions are not likely to occur exactly symmetrically on the two sides of the brain Von Monakow, he believes, reports a case in which there was a lesion between the oculomotor centers beneath the floor of the aqueduct of Sylvius there was no loss of individual movement of the eyeballs, but there were no associated movements because of the destruction of the connecting fibers Since the presentation of his paper in 1905 Dr Spiller has had the opportunity of observing two more cases of paralysis of associated upward movement of the eyeballs One of these patients was under the care of Dr Potts, and the condition seemed to be caused by a lesion in the optic thalamus, as in connection with other symptoms, sensory hemiplegia persisted and motor hemiplegia largely disappeared The other case was that of a patient of Dr Langdon, in the service of Dr George E de Schweinitz, seen by Dr Spiller in consultation A young man, aged 17, who had been perfectly healthy until March, 1906, began to have disturbance of vision, and had to leave work, he complained of stiffness in his limbs and joints When seen on May 12, 1906, he was found to have complete paralysis of upward movement of the eyeballs, choked disc on the right side, loss of the patellar tendon reflex and of the Achilles tendon reflex, and hemianopsia, but no paralysis of the limbs He entirely recovered It was probably a case of polioencephalitis superior, for which no cause could be found

In one of his cases reported in his paper, of complete paralysis of upward associated movement of the eyeballs, death occurred in May, 1906 Dr Spiller was so fortunate as to obtain the patient's brain through Dr Cadbury Shortly before going to Boston Dr Spiller examined a number of sections from this case There was nothing abnormal that could be seen by the naked eye It was only by staining section after section and examining each very carefully that he was able to discover a very minute tumor of the cerebral peduncle near the oculomotor center Dr Spiller still believes that when there is persistent paralysis of upward associated movements of the eyeballs it is due to a lesion near the oculomotor nuclei

DR. T H WEISENBURG, Philadelphia, said that in his paper reference to the cases in which lesions involve the oculomotor centers of either side was only brief, as these cases are very rare, and besides a critical study has shown that in not one were the lesions limited to the oculomotor centers Regarding Dr Mills' opinion that there is a distinct motorocular center in the occipital lobe, Dr Weisenburg said he is not fully in accord because of the lack of such evidence He has no reason, however, not to think so for if Dr Mills holds any view it is only a question of time when it will be proved to be true

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ARSENIURETED HYDROGEN POISONING

WITH REPORT OF FIVE CASES

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Our knowledge of the toxic effect of arseniureted hydrogen gas, AsH_3, on the animal body is limited yet to the experimental results of certain investigators of the origin of icterus, notably of Stadelmann Minkowsky and Naunyn and Eppinger and to the scattered clinical reports of less than one hundred cases of poisoning in man It was believed at the time of the occurrence of these five cases here detailed that numerous others would be reported from the different mining districts which had made use of the MacArthur-Forest cyanid process in the working of low grade gold ores owing to the numerous attempts to smelt locally the zinc "product," which contains the gold values But after the lapse of eight years these cases remain the only instances of such poisoning from this source that have come to my attention Hunting through the meager literature of the subject I have been able to collect the reports of fifty-five cases They are all isolated in nature some of them in the person of experimental chemists others in laborers in analin d works several among makers of toy balle e instance reported by Trost in 1 of ar n poisoning the result of H it concerned the techn om l

ore in the course of which procedure zinc was added to the ore charge, smelted, and a zinc-silver product obtained, which, in turn, was treated with a warm dilute hydrochloric acid solution to render the zinc soluble and the silver insoluble as their respective chlorids Both the zinc and the hydrochloric acid contained arsenic as an impurity, the latter 0 027 per cent., and as a result nine workers became poisoned with the generated arseniureted hydrogen gas, three of them fatally

This compound of arsenic has been known since 1775, when Scheele discovered it while experimenting with arsenic acid Its intense toxic properties were not known until Gehlin, a Munich chemist, fell victim to it in 1815 Producing the gas intentionally from known arsenic salts, he attempted to recognize its presence by the odor and inhaled enough to cause his death nine days later The briefly reported symptomatology of this, the first case, corresponds closely with all others observed Since this time it has been closely studied chemically, and its production is known to occur under the following conditions (a) By the action of nascent hydrogen on a soluble salt of arsenic, (b) by the action of dilute HCl or H_2SO_4 on the arsenids of zinc or tin, (c) by the action of water on the arsenids of alkali metals, and (d) by the action of a hot solution of potash and powdered zinc on reducible compounds of arsenic It is a colorless gas with a strong odor of garlic, soluble in 5 volumes of water, of neutral reaction, and possessing a density of about three times that of air It oxidizes slowly in the presence of air and moisture with deposition of the element It burns with a greenish, almost colorless flame, with formation of arsenous oxid, As_2O_3 Its mixtures with air or oxygen are explosive Just why arseniureted hydrogen is the most poisonous of all the mineral compounds of arsenic is not definitely known It contains a relatively high percentage of arsenic It is a diffusible gas and capable of rapid absorption from the lung tissue But it is possible that its great toxicity is due, in part at least, to certain properties acquired from its combination with hydrogen

The salient points in the clinical histories of the published cases are best reviewed in tabular form more detailed individual description being unnecessary, as all cases showed much the same symptomatology, and many of them have been reviewed by other writers, namely, by Geigy and Becker

For the following brief clinical reports of these five cases I am indebted to Dr A L Castleman, then of Mercur, Camp Floyd Mining District, Utah, and to Dr A J Hosmer, of Salt Lake City, under whose care the patients were

CASE 1—1896 D C J, metallurgist, a young, well built, healthy man

History—About two hours after having worked with the refining of zinc product from an experimental cyanid mill, he was suddenly seized with a feeling of intense malaise and chilliness, soon followed by intense abdominal pain which radiated toward the back The first urine voided was dark and bloody, urination became more frequent and a larger quantity than normal in 24 hours was passed The bloody character subsided slowly the urine becoming clear after the sixth day Jaundice set in early, it was of a distinct yellowish type like that of an acute catarrhal jaundice, but soon becoming of a bronze color This disappeared slowly during convalescence Slight fever, always under 100 F, was noted during the first three days The pulse was rapid and easily compressible There was no dyspnea at any time noted The patient was not allowed active movement The liver spleen and kidneys were never palpable. The severely acute symptoms disappeared after three days Convalescence required five weeks, but a moderate degree of anemia remained for several weeks more At time of writing, 10 years from time of illness, the patient is entirely well, shows no signs of kidney lesions and has passed examinations for life insurance

CASE 2—Aug 22, 1898 J W, helper, aged 34, good health

History—The man was suddenly overcome about 5 30 p m, while at work over a vat in the zinc cyanid refining plant of the Golden Gate Gold Mining and Milling Company, Mercur, Utah The vat contained the zinc cyanid product, sulphuric acid and various impurities from the ore, especially large traces of arsenic The patient was carried into the open air by the other workmen, where Dr Castleman found him a few minutes later He was then in a semi dazed condition, could not stand, complained of coldness, numbness and cramping of the extremities and of severe nausea and vomiting The vomitus was the normal stomach contents The skin was livid in appearance, pulse 72, temperature normal A small quantity of urine voided at this time looked normal to the eye The patient was removed to his house At 6 30 p m severe abdominal pain set in, which radiated into back and loins, and of which he complained bitterly, although he remained in a semi stupor Vomiting continued every 15 or 20 minutes Diarrhea was present At 7 p m the condition of the patient was the same and naturally voided urine appeared normal Temperature was normal The patient later became very restless, even when free from pain At 10 p m hiccough set in and his skin began rapidly to assume a bronzed color At this time he tried to pass urine but failed There was much vesical tenesmus Catheterization afforded one ounce of black urine containing much heavy sediment This was the last urine obtained although frequent catheterization was resorted to The following morning the skin was of a deeper bronze or copper color Vomiting and hiccoughing continued at frequent intervals The stools were dark and glairy in appearance The vomitus was stained a green color Pulse persisted from 110 to 120, with some irregularity and low tension There was no delirium, but the stuporous condition remained The patient lost strength until 10 p m of August 23, when he became unconscious and died the following morning, 60 hours after his exposure to the gas

Examination of Urine—I later examined the catheterized urine and found it to contain large quantities of methemoglobin, some bile pigment, large quantities of detritus, seemingly disintegrated red blood corpuscles, and some washed out pale looking intact corpuscles Small traces of arsenic were found by the Reinsch test, but not with a Marsh apparatus The stools contained much bile pigment Blood smears made by Dr Hosmer showed an evident anemia due more to a solution of the hemoglobin contents than to an actual disintegration of the red cells Blood counts were not made

Autopsy—Six hours after death Body of a well developed and nourished man Rigidity was present and some posterior lividity Skin was uniformly copper colored, darker over face, neck and upper chest Subcutaneous fatty tissue and muscle were copper colored Abdominal and pleural cavities were negative except for slight brownish staining Lungs were negative Pericardial sac was filled with brownish fluid Myocardium was deeply copper stained, otherwise negative Stomach contained small amount of mucus Scattered submucous ecchymoses appeared throughout, more marked at cardiac end of lesser curvature The intestinal mucous membrane was uniformly injected, the descending colon was small and contracted Liver weighed 2 600 grams, it was dark colored and the cut surface was very bloody lobular markings were fairly distinct The gall bladder was distended with a large amount of black dense tarry bile Spleen weighed 320 grams, black pulp soft and bloody Malpighian bodies were visible Kidneys together weighed 290 grams, they were dark purple colored Capsule stripped readily On the cut surface a large, hemorrhagic undifferentiated appearance was seen, soft and bloody Cortical markings were lost. The renal pelvis was empty and mucous membrane smooth Bladder was small empty and contracted to large walnut size Bone marrow of ribs and right femur was stained deep copper color Other organs were negative Brain and cord were not examined

Microscopic Examination—The tissues had been hardened in 70 per cent alcohol Preparations were made with (a) hemo toxylin and eosin, (b) alum carmin, potassium ferrocyanid and hydrochloric acid, and (c) alum carmin, equal part solu tion of ferrocyanid and ferrocyanid of potassium and hydro chloric acid

Liver The structure of cords of liver cell is well main tained, the nuclei staining well Masses of orange, brown and black pigment granules are seen in all cells, more marked in the region of the intralobular veins and at the peripheries The radicles of the portal vein are filled more or less with coagulum and corpuscle débris There is an absence of round cell infiltration There is an absence of Prussian blue pre cipitation in the cyanid preparations excepting in the contents of the hepatic veins This is stained quite uniformly bluish

Kidneys The outlines of the tubules and the glomeruli are fairly well retained The capsules of the latter are filled with a lightly granular coagulum containing some few iso lated well stained cells The convoluted tubules are thor oughly disintegrated. A heavy granular coagulum fills each lumen The cuboidal and short columnar cells of the small collecting tubules have undergone the least destruction of any, yet they all show necrotic changes There is an irregularly uniform, slight increase of the interstitial connective tissue Nowhere is any marked round-cell infiltration noticed Formed blood cells are sparingly seen Throughout the cortex the Prussian blue reaction is seen only in scattered areas Immediately beneath the capsule is an area 1 to 2 m m thick which shows an almost structureless condition Here the cya nid reaction is well marked. In certain portions of the medulla this reaction is prominent. It seems to bear no rela tion to the amount or location of corpuscle débris

Spleen The splenic pulp is loosely arranged The Mal pighian corpuscles numerous and small. Certain large areas of necrosis are seen, composed of a reticulated coagulum, tak ing an eosin stain well, and containing in its meshes corpuscle débris and many pale corpuscles from which the hemoglobin contents have been removed No extra vascular hemorrhage is seen No evidence of the iron reaction is found in the cyanid treated preparations

Bone Marrow Normal structure Blood vessels contain more or less coagulated mass of débris in which there is considerable brownish or black pigment granules Some of these granules give a Prussian blue reaction, most of them do not About a few of the vessels a diffuse blue staining is seen, not associated with the granules nor extending into the lumen of the vessel.

Tissues from other organs were not received Pieces of the kidney treated by the Reinsch test gave traces of arsenic The liver and spleen did not do this

Anatomic Diagnosis—Acute hemorrhagic nephritis, acute splenic tumor with areas of necrosis, acute hepatic tumor, acute disseminated submucous hemorrhages of stomach and intestines, mild, diffuse red blood corpuscle destruction, dif fuse discoloration of superficial and deep tissues

CASE 3—L. G., assayer, a well developed, healthy man, was exposed to *generating arseniureted hydrogen gas* at the same time as the patients in Cases 2, 4 and 5

History—Four and a half hours after exposure while sit ting in the doctor's office talking with him and feeling well, he suddenly became cold, weak, very pale and numb about the feet. He walked a short distance to his house with the help of a companion, but fell as he entered the door and could not rise He was seized soon with nausea and considerable lumbar pain, no abdominal pain His urine became rapidly bloody, remaining such for seven days It was increased in amount He began to turn yellow about the time of the beginning of his pain This deepened in a day's time to a bronze and later took on a distinct greenish tinge Temperature remained about 100 F or less for three days, then went to normal The pulse was accelerated, but of moderately good tension Convalescence lasted six weeks, after which a decided anemia remained for some time The patient is now living, is well and has never shown signs of kidney trouble.

CASE 4—J M., helper, a healthy man, suffered same expos ure to gas as former two patients

History—He was taken sick in a similar way to patient in Case 3 while standing on the street, five hours after exposure He was assisted home, and also fell to the ground on reach ing the house and was unable to rise He had walked prob ably the length of one and a half of the ordinary city blocks The patient's symptoms were severe from the start. His urine became hemorrhagic and on the fourth day nearly ceased After that until his death, on the ninth day, only from 5 to 10 c.c of urine could be obtained in 24 hours by catheterization An early jaundice passed rapidly into a brown color of the skin and scleræ The pulse became rapid and weak, and toward the end the man became comatose and died without delirium or convulsions No autopsy was ob tained Blood smears from this case showed the same washed out appearance of the red cells, rather than an extensive erythrocyte destruction

CASE 5—A., helper, a healthy man, some time within 24 hours after exposure began to pass bloody urine and developed a jaundice like that of a mild acute catarrhal jaundice. His hemoglobinuria lasted four days, at the end of which time he returned to his work His symptoms, consisting mostly of slight chilliness and malaise, were indefinite and unimportant in character The patient made a complete recovery, is now living and is well

ETIOLOGY

Wherever the formation of arseniureted hydrogen, intentionally or unintentionally, is possible, poison cases will occasionally be met. With the extensive applica tion of the MacArthur-Forest cyanid process in the handling of low grade gold ores, which has as its princi ple the solution of the gold values from the ore by means of a dilute potassium cyanid solution and the recovery of the values from this solution by its filtration through zinc dust or shavings, which precipitates the gold partly in the form of fine metallic gold and partly as a double cyanid salt of gold and zinc, it was expected that cases of arsenic poisoning from this source would be rapidly multiplied First, because arsenic is a fre quent constituent of ores and more or less of it passes into solution and is collected in the product, and, sec ondly because it is often an impurity of the zinc and also of the sulphuric acid sometimes used in the refining of the product However, no other cases have been reported from any of the mining districts in South Africa, Australia, or from this country where the cyanid process is extensively used, so that we are justified in placing these cases in the list of accidental poisonings which have occurred infrequently in the arts and in experimental laboratories

Of the sixty cases here recorded, seventeen patients were scientific men or their students, fourteen were workers in metallurgical reduction works, seven in aniline dye works Ten were Italian balloon peddlers who gen erated hydrogen gas from scraps of zinc and impure acid and made their own balloons Barker's case is that of a man who was cleaning castings in a foundry with sulphuric acid In the manufacture of chemicals, as zinc chlorid, these accidents have occurred, so that the possible source of this form of arsenic poisoning is wide and one may wonder, indeed, that so few cases have been recorded

PATHOLOGY

The pathology of these cases differs in many ways from that of other arsenical salt poisonings The blood and chief excretory organs receive the brunt of the effect of the gas—the blood directly the kidneys both directly and indirectly The skin is discolored from the deposition of pigment. The degree of color depends on the degree of the portion of this pig ally

TABLE OF CASES OF ARSENIURETED HYDROGEN POISONING

			Occupation	Recovery	Death	Days	Appearance of First Symptoms	First Symptoms	Urinary Symptoms: (a) Hemoglobinuria	(b) Duration of days	(c) Anuria	(d) Polyuria	Skin Discoloration	Type of Symptoms	Dyspnea	Splenic Tumor	Fever	Pulse	Remarks
1	Gehlin	1815	Chemist		+	9	1 hour	Nausea	+	Death	?	?	?	Severe	?	?	?	?	
2	Schindler	1830	Pharmacist	+		49	8 hours	Dizziness	+	5	0		Dark brown	Moderate	?	?	?	Weak, frequent.	
3	Taylor	1836	Chemist		+	24	?	?		?			?	?	?	•	?	?	
4	O Reilly	1841	Chemist		+	7	Immediate	Dizziness.	+	Death	0		Copper to greenish	Severe	?	?	0	Weak then forcible	Postmortem
5	Mount	1850	Chemist	+		22	1 hour	Choking	+	?	0		Icteric	Moderate	?	?	?	Full hard, frequent	Died later of uremia,
6	Vogel	1851	Physicist.	+		2	Immediate	Weakness	+	1½	0		?	?	0	?	Fever	Quiet	
7	Ollivier	1863	Chemist		+	5	1 hour	Headache	+	5	+		Earthy yellow	Severe	+	+	?	110 full regular	
8	Chevallier	1863	Pharmacist.	+		?	8 to 10 hr	Headache		?			?	Mild	?	?	?	?	
9	Vallette	1870	Chemist		+	30	Few minutes	Nausea	+	?	?		Icteric	Moderate	?	?	?	?	
	Vallette	1870	Worker	+		15	Few minutes	Urinary	+	?	?		Icteric	Severe	Labored	?	?	?	
10	Ollivier	1872	Physicist	+		19	6 hours	Bloody urine	+	3	?		Icteric	Moderate	?	?	Fever	?	
	Ollivier	1872	Assistant	+		Less	6 hours	Bloody urine	+	?	?		Icteric	Mild	?	?	?	?	
11	Trost	1873	Director	+		few	?	Unwell	?	?	?		?	Mild	?	?	?	?	
	Trost	1873	Worker	+		19	Some hours	Nausea	+	3	0		Icteric	Moderate	Labored	?	Fever	100	
	Trost	1873	Worker	+		?	5 hours	Nausea	+	4	0		Dark yellow	Moderate	?	?	Fever	Rapid	
	Trost	1873	Worker	+		Few	?	Slight symptoms.		?			?	Mild	?	?	?	?	
	Trost	1873	Worker		+	2	? hours	Nausea pros.	*	2			Yellow	Severe	?	?	?	160	
	Trost	1873	Worker		+	6	? hours	Nausea	+	6	+		Yellow turgid.	Severe	?	?	38 5	160	
	Trost	1873	Worker		+	3	? hours	Nausea	+	3	+		Yellow, turgid	Severe	?	?	?	?	
	Trost	1873	Worker	+		? mo	? hours	Nausea		?			?	Moderate	?	?	?	?	
	Trost	1873	Worker	+		? mo	? hours	Nausea		?			?	Moderate	?	?	?	?	
	Trost	1873	Worker	+		? mo	? hour	Nausea		?			?	Moderate	?	?	?	?	
12	Wächter	1878	Balloon peddlers	+		? wk	1 hour	Nausea	+	3	0		Yellow	Moderate	30	+	38 6	100 full	
	Wächter	1878	2d	+		45	1 hour	Nausea	+	4	0		Lemon yellow	Moderate	36	0	38 /	108	
	Wächter	1878	3d	+		47	1 hour	Nausea	+	9	0		Gray, icteric	Severe	36	+	38 2/	120, full	
	Wächter	1878	4th		+	10	1 hour	Nausea	+	10	+		Lemon yellow to gray	Severe	?	+	?	120	
13	Dütting	1888	Balloon peddlers		+	6	? hour	Nausea	+	6	+		Icteric to deep yellow gray	Severe	?	0	?	?	Postmortem
	Dütting	1888	2d		+	3	? hour	Nausea	+	3	+		Yellow	Severe	?	?	?	?	Postmortem
	Dütting	1888	3d	+		7	? hour	Headache	+	4	0		Yellow	Mild	?	+	?	?	
	Dütting	1888	4th	+		10	? hour	Headache		4			Gray yellow	Mild	?	?	?	?	
	Dütting	1888	5th	+		16	? hour	Headache		4			Dirty yellow	Mild	?	?	?	?	
	Dütting	1888	6th	+		9	? hour	Headache		2	0		Icteric	Mild	?	?	Fever	?	
14	Fitner	1879	Physicist	+		5	? hour	Nausea	+	2	0		Icteric	Mild	?	?	?	?	
	Fitner	1879	Physicist	+		4	? hour	Nausea	+	1	0		Icteric	Mild	?	?	?	?	
	Eitner	1879	Student	+		7	? hour	Unwell	+	?	0		Icteric	Mild	?	?	?	?	
	Eitner	1879	Student	+		7	? hour	Unwell	+	?	0		Icteric	Severe	Free	+	39 3	?	Postmortem / Uremia
15	Coester	1884	Anilin worker		+	13	? hour	Nausea	+	13	+		Icteric	Mild	?	?	?	?	
16	Benz	1885	Anilin worker	+		8	? hour	Nausea	+	4-6	0		Icteric	Mild	?	?	?	?	
			2d	+		8	? hour	Nausea		4-6	0		Icteric	Mild	?	?	?	?	
			3d	+		8	? hour	Nausea		4-6			Icteric	Mild	?	?	?	?	
			4th	+		8	? hour	Nausea		4-6			Icteric	Mild	?	?	?	?	
			5th	+		7	? hour	Nausea		4-6			Icteric	Mild	?	?	?	?	
17	Becker	1885	Student		+	3	2½ hours	Loin pain	+	2½	+		Bronze	Severe	?	0	36 8 to 38 3	104	Postmortem
18	Geigy	1887	Factory hand		+	7	• hour	Nausea	+	7	+		Bronze to yellowish	Severe	46 24	0	37 2	104	Postmortem
	Geigy	1887	Anilin worker	+		16	? hour	Nausea	+	6	0		Brown	Moderate	20	0	37 9	100	
19	Schickart	‡1891																	
20	Martin	1893	Foreman in chemical works.		+	5	21 hours	Generally ill pain in abdomen	+	5	†		Deep yellow	Severe	0	?	0	104 irregular at times	
21	Mann and Clegg		Laborer		+	6	Soon	Vomiting pain in back	•	4	+		Jaundice	Severe	?	0	?	?	Postmortem
			2d		+	6	Soon	Vomiting pain in back and over liver	?	4	+		With erythema	Severe	+	+	?	?	Postmortem
			3d	+		8	Soon	Malaise and back pain	+	8	0		Jaundice	Mild	0	0	?	?	
			4th	+		8	Soon	Malaise and back pain	+	8	0		Anemia jaundice	Moderate	0	0	?	?	
			5th	+		12	10 hours	Vomiting epigastric pain.	+	?	0		Some jaundice	Mild	•	0	?	?	
22	Gulivitsch	1898	Foundryman	?	?	?	1 hour	?	+		0	+	?	?	?	?	?	?	?
23	Müller		Tin worker	+		?		?		?			?	?	?	?	?	?	
24	Barker		Laborer	+		?		?		?			?	?	?	•	?	?	
25	?		Chemist		+	?		?		?			?	?	?	?	?	?	
	Author	1906	Metallurgist	+		35	? hours	Malaise, chills abdom pain	+	6	0	+	Jaundice to bronze	Moderate	0	0	Slight 3 da	Rapid, soft.	
			Helper	+		4	Within 24 hours	Slight malaise	+	4	0	0	Jaundice	Mild	0	0	0	Normal	
			Assayer	+		42	4½ hrs	Cold, nausea lumbar pain	+	7	0	+	Bronze greenish	Moderate	0	0	38 8 3 da	Rapid	
			Helper		+	9	5 hours.		+	9		0	Brown	Severe	0	0	?	Rapid soft	
			Helper		†	60	At work	Cold vomiting abdominal and lumbar pain	+	60 hour	+	0	Bronze to copper color	Severe	0	0	Slight	Rapid soft.	Postmortem

• Small amount † Scanty ‡ Reference only (Index Medicus)

tive; edema of the dependent portions has been noted In patients who have lived some days before death has occurred a moderate degree of fatty change of the myocardium has been described, but never are there the high grade fatty changes of the parenchymatous organs that are seen in phosphorus poisoning, for instance There is a notable absence of fatty degeneration. The kidneys are usually somewhat enlarged, dark colored, very bloody and the seat of a high grade hemorrhagic nephritis. The tubules are filled with detritic casts, the blood vessels with broken-down red blood cells The glomeruli are least involved Round-cell infiltration is not much seen, for the reason that the process is so intense and so little time elapses that reactive measures have not time to take place The liver is large, dark colored and bloody, the cells contain much pigment and but little fat. The biliary radicles contain pigment. The gall bladder is distended in all reported cases with a thick, tarry bile, and the bile ducts are open. The spleen shows acute tumor, the stomach and intestines have nothing characteristic, except the large amount of bile in the contents of the latter. All serous membranes are more or less stained Traces of arsenic have been obtained from the urine, kidney, liver, bile and blood by different investigators. Iron-containing pigment is rather generally found throughout the body as shown by cyanid preparations

SYMPTOMATOLOGY

Three symptoms stand out as fairly characteristic of this type of arsenic poisoning Pain in the region of the kidneys, jaundice and hemoglobinuria The long period between the inhalation of the poison and the onset of the symptoms is the opposite of that of other arsenical salts Although this period varies within limits, it is seldom less than one hour and usually is several The shortness of the period depends to a large extent, though this also varies, on the amount of arsenic inhaled Becker's patient experienced symptoms within one-half hour and terminated fatally in three days Still, in this case the patient had been at work in the same laboratory room the entire afternoon and could easily have been poisoned several hours before the time noted In all cases of moderate or great severity the onset is fairly sudden with the feeling of coldness or with chills, rapidly oncoming prostration, dizziness, headache, numbness of the extremities and pain Nausea, in some cases vomiting, is found, associated usually with the pain and, in a measure, proportionate to its severity The vomitus is first the normal stomach contents, later it is mixed with more or less bile In one case of Vallette's a quantity of black blood was vomited once

The pain is usually severe, sharp and paroxysmal though the patient is seldom entirely free from pain and in the majority of cases it is located in the lumbar region of the back and radiates into the loins Others have experienced diffuse abdominal pain or an epigastric pain, associated with the lumbar distress In only the first of this series of five cases was all pain localized in the abdomen and none experienced in the region of the kidney In very mild cases there may be no pain In the non-fatal cases actual pain ceases, in a few days usually with the establishment of free diuresis In those terminating fatally it continues until relieved by unconsciousness, which precedes death

Hemoglobinuria is a constant symptom in all cases It begins within a few hours of the onset lasts a variable length of time measured by days, and terminates either favorably by a gradual return to the normal or fatally by complete urinary suppression In many of the non-fatal cases a distinct diuresis is noted independent of treatment In two of our cases this was present In the least severe case there was nothing noted except the hemoglobinuria and the light grade of jaundice The urine varies from dark red to brownish black in color, contains sufficient albumin to completely coagulate it by heat, and shows large quantities of methemoglobin, oxyhemoglobin and some bile pigments (Geigy) The sediment is variable It may be very small in amount and contain only a few epithelial cells and no whole or disintegrated blood elements in the mild cases The sediment of the severer cases may be very rich consisting of large quantities of disintegrated red cells (Wächter, Dutting, author), a variable number of washed-out, pale-appearing but otherwise uninjured erythrocytes (author), and granular epithelial and blood casts (Wächter Geigy) though for the most part the urinary condition is almost a pure methemoglobinuria Traces of arsenic were found in the urine by Wächter and myself In one case, that of Muller (1837), there was a generalized subcutaneous emphysema of uncertain origin; in all other reported cases jaundice was present This begins soon after the onset of the symptoms In our mild case it remained a distinct, yellowish jaundice In those of uni severity the skin soon turns a darker color, becoming brownish, coppery, sometimes greenish The discoloration lasts usually some weeks, gradually fading when the coincident anemia becomes evident

Nervous symptoms are present in all severe cases In none of our cases were they severe Stupor semi-unconsciousness, later unconsciousness were present in our fatal cases In Case 2 the patient at first had cramps in the legs, later he was very restless even when free from pain There were no evidences of uremic twitchings or convulsions as reported by Coester and Becker Exaggerated deep reflexes were not present in our cases nor reported so in others Severe headache has been noted by some though as a rule, it is not so much complained of as the lumbar pain Disturbances of vision, hearing and sensation have not been found

The vascular system presents the picture of a severe blood dissolution The anemia is grave It consists seemingly of a solution of the hemoglobin content from the red cell more than a disintegration of the cell itself, although there is also a widespread destruction of the erythrocytes The hemoglobin by Fleischl or Gower may be relatively high Rouleaux formation is retarded or prevented There is no leucocytosis Geigy reports in his first case the following blood findings Reds 885,000 to 920,000 hemoglobin (Gower), 57 per cent presence of disintegrated red cells and the shadows of non-disintegrated cells No rouleaux formation In his second case there were Reds, 2,920 000, hemoglobin, 62 per cent , small tendency to rouleaux formation, few disintegrated cells and few shadows of cells Becker in his case, found by smears large numbers of unstained shadows of red blood cells, much detritus and few white cells This was the condition in two of our cases as noted in smears made by Dr Hooker Diffus bleeding is less common than might be expected from the condition of the blood and urine Muller described large and small petechial spots on the extremities of his patient Vallette described, in his second case which resulted fatally severe hemorrhages from the nose gums tonsils bowels and genitalia Blood in the stool

has been noted a number of times But these conditions are the exception

Moderate dyspnea on exertion is commonly described Distinct air hunger in all of our cases was noticeably absent in spite of the severe blood destruction It is mentioned, however, by Becker and Geigy The stools are usually loose Diarrhea may occur, but devoid of signs of inflammation as with other arsenic compounds The stools are dark colored from the large amount of bile contained Without doubt death is due largely to acute urinary suppression Some patients, as stated above, have shown distinct uremic signs, the majority, however, have not Of the 20 fatal cases here recorded, the most rapid death was that of Trost's fourth patient, who died in two days Our second patient died in 60 hours from the time of exposure Vallette's patient lived for thirty days before dying, which is the longest period of time noted The average for 19 cases, in which the duration of the illness is stated, is 8 2 days Of the 60 patients whose cases are recorded, 40 recovered, of these, the length of convalescence, that is, the length of time in hospital or kept from work, is given for 25 The longest is seven weeks, reported by Schindler, the shortest, four days, one case reported by Eitner and one by me The average duration of illness was 17 3 days In all of my cases a severe anemia lasted for some time after all other signs of illness had disappeared Ultimate recovery without complications or sequelæ was the result in all cases

TREATMENT

Aside from measures taken to prevent the escape or formation of arseniureted hydrogen gas in laboratories or in the arts, the treatment in such cases is purely symptomatic Three indications are present, along the lines of which much can be accomplished for the patient. First, the need of abundant fresh air Oxygen should be of much benefit and should be used continuously Secondly, the establishment of free diuresis to prevent the blocking of the uriniferous tubules by disintegrated blood cells and tubule epithelium Toward this end all bland diuretics can be used, especially large quantities of water and milk, and often repeated saline enemas and warm baths General supportive treatment, as in all prostration cases, is, of course, always needed The use of digitalis need not be avoided for fear of a fatty myocarditis, because the latter, to any extent, does not exist As a rule, the patient with suppressed urine will die Active diuresis is a very favorable sign, and the majority of patients with polyuria will recover The long-standing anemia is much benefited by iron

THE EFFECT OF ARSENIURETED HYDROGEN GAS

Among the earlier writers on this type of arsenical poisoning, Eulenberg[26] (1865) stated that after aspiration of the gas it was no longer to be demonstrated in the blood Hermann[27] (1874) determined that arseniureted hydrogen was oxidized by the oxygen contents of the hemoglobin to arsenous acid, and from this fact he believed the poisonous properties of the gas due to its property of breaking up oxyhemoglobin That arseniureted hydrogen is oxidized to arsenous acid by the blood and also by the liver tissue was later verified by Stricker[28] (1882) The reduction of oxyhemoglobin with the following destruction of the red blood cells was first noted by Bogomaloff[29] (1868) and Rabuteau[30] (1873) These observations were of importance because of their bearing on the previous discovery of Virchow[31] (1847), that all extravasated blood increased the formation of biliary pigments, and also the relation the action of the gas bore to other intoxications, infectious diseases, etc, which were accompanied by icterus without an apparent stasis of the bile outflow That is, the icterus accompanying this form of poisoning belonged to the old group of hematogenous as opposed to hepatogenous icterus or icterus of pure stasis Because of this relationship to the pathogenesis of icterus more is known of the specific effect of arseniureted hydrogen than otherwise would have been In 1868 B Naunyn[32] conducted the first animal experiments with the gas and found the specific changes in the blood and hemorrhagic infarcts of the kidneys His work led him to believe more strongly in the view then existing that bile salts were formed in the circulating blood as well as in the liver The later reports of poison cases by Vallette, Ollivier, Trost, Wächter and Eitner added much encouragement to this belief Shortly afterwards Stadelmann[33] began a series of animal experiments with toluylendiamin and arseniureted hydrogen to prove a common basis for both types of icterus. In many sections on dogs he found the gall bladders uniformly distended, the bile thick, tarry and tenacious and histologically the biliary radicles in the liver engorged with bile pigment and crystals At the same time he noticed that the more severe the icterus the less bile there was in the intestine It was clear to him, therefore, that stasis was obtained by the consistency of the bile itself, and that the icterus was as dependent on mechanical causes as any obstructive jaundice The primary cause lay in the destruction of the blood, but the real cause was an overproduction of bile which clogged the biliary passages and allowed resorption into the lymph and blood spaces to occur He termed this condition icterus from polycholia, or pleiochromia

Minkowsky and Naunyn,[34] a little later, undertook a series of experiments with geese and ducks, because the anatomic relations between the portal vein and renal veins is such that the liver can be removed from the general circulation Normal geese and ducks showed, after a short inhalation of arseniureted hydrogen gas, hemoglobinuria and a distinct increase of bile pigment excretion Fowls from which the livers had been removed showed a hemoglobinuria, but no bileverdin in the urine These experiments were seemingly conclusive that the formation of bile salts could not occur without the presence of the liver Histologically they noted large cells containing fragments of red blood cells and clumps of hemoglobin scattered mainly through those organs, as the liver, spleen and bone marrow, where the blood current was slowest, which gave an iron reaction when treated with ferrocyanid of potassium and hydrochloric acid Moderately rapidly this bile pigment became reduced and entirely disappeared The probable formation is that of hemotoporphyrin from the free hematin, the former passing to the liver, where it is converted into biliary salts These cells containing fragments of erythrocytes found in the liver capillaries were also noticed to stain green when treated with a 5 per cent corrosive sublimate solution The cells in the other portions of the body did not do this, and this fact was considered by both authors to mean an actual transformation into bilverdin as taking place in these cells found within the liver They also assume that the hemoglobin dissolved from the cells and remaining free in the serum is transformed into bile salts by the liver cells Ponfick[35] has asserted that the normally func-

tionating liver will take care of one-sixtieth part of the total hemoglobin content Whenever destruction of the red cells liberates an amount which exceeds this quantity icterus will result Clinically at least, it would seem that this condition does not hold true and that something besides a destruction of blood is needed to explain an icterus, especially when associated with little or no ascertainable anemia Many have held that a second factor is necessary, a functionating disturbance of the liver cells themselves, such as is assumed in case of the kidney cell which permits an albuminuria It is easy to assume the possibility of disturbed function on the part of the liver cells from the effect of so intense a toxic agent as arseniureted hydrogen

The more recent work of Eppinger,[36] which is based on careful histologic preparations that have allowed the walls of the bile capillaries to be plainly seen and have demonstrated imperfect lymph spaces between the bile capillaries and the cells, has again added more weight to the purely mechanical theory of icterus He describes in these types of jaundice obstruction of the capillaries, often a sinuosity, varicosity, at times a rupture of the walls, and as a result the bile escapes into the lymph spaces and thence into the blood This obstruction of the capillaries is often of the nature of distinct casts or thrombi and does not concern the bile passages In the main this work has been confirmed by Minkowsky and Winckelmann,[37] although they do not find these lesions in all forms of jaundice examined, especially of infectious jaundice In these cases the former believes a specific action of the cell the primary cause, so that he still groups icterus into two large classes—the true obstructive type in which mechanical obstruction is the underlying cause, and the toxic, cyanotic and nervous type, in which a disturbed cell function is the determining factor

In brief résumé, arseniureted hydrogen is an exceedingly toxic compound of arsenic which acts on the animal body in a way distinct from that of other arsenic salts The principal organs attacked are the blood and the kidneys The lesions of the former consist of a rapid dissolution of the hemoglobin content and an actual disintegration of the red cells The effect on the latter as seen postmortem, is in intense, diffuse, hemorrhagic, degenerative process, involving the convoluted tubules most severely and the glomeruli least and showing but slight reaction toward regeneration The jaundice which is present in all cases is probably of an obstructive type in the main, though it is highly probable that disturbed liver cell function also plays a certain rôle in its formation

I wish to thank Dr Castleman and Dr Hosmer for the use of the cases and their clinical reports, and also Professor Hektoen in whose laboratory this work was done

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Clinical Notes

INSPECTION OF THE JUGULAR VEIN, ITS VALUE AND ITS LIMITATIONS IN FUNCTIONAL DIAGNOSIS

A CRITICISM BY DR HIRSCHFELDER AND A REPLY BY DR MCCASKEY

I A CRITICISM

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The subject of heart block and the recent additons to the knowledge of the allied functional disturbances of the heart and of the so called cardiac neuroses have aroused a great deal of interest in the revelations from tracings of the venous pulse and polygraphic tracings Although with appropriate apparatus[1] these are somewhat less difficult to obtain than are good radial pulse tracings, some form of rather expensive polygraph is necessary, and about half an hour is required to obtain the desired record[2] Nevertheless so much information is to be gained by what they show that this procedure can scarcely be omitted from the modern routine examination of heart cases

It is therefore, natural that efforts should be made to minimize the labor involved in such investigation, and in this regard the recent contribution of Dr G W McCaskey[3] marks an attempt toward simplicity By means of the Mackenzie receivers[4] placed on the jugular vein and apex and attached to tambours bearing levers in the usual manner the pulsations from these areas are transmitted to the levers, which are brought as close as possible to each other, and from the respective movements the events of the cardiac cycle are deciphered He does not state what advantage this visual method has over simply watching the pulsation of the jugular vein while feeling the pulse in the carotid with the finger

1 Hirschfelder (Arthur D) Graphic Methods in the Study of the Cardiac Diseases American Jour Med Sci 1906 cxxxii 78
2 With my polygraph a modified form of the Erlanger blood pressure apparatus a set of records may occasionally be obtained in less than ten minutes but usually more time is required
3 An Ocular Method for the Diagnosis of Heart Block Journal A M A 1907 xlviii 418
4 Mackenzie (James) The Study of the Pulse (London) Macmillan 1902

The latter method is often most satisfactory and should be absolutely so for the diagnosis of complete heart block when there are four or more beats of the auricle to one of the ventricle, in fact, by that means the first diagnoses of heart block were made

In the numerous tracings from the jugular veins which I have made at the Johns Hopkins Hospital during the past two years I have been struck by the fact that it is much easier to see these pulsations than to transmit them to the tambour lever, so that no small fraction of the time for obtaining good permanent records is required in this method I have frequently watched the movements of the levers, as now suggested by Dr McCaskey, in order to see whether one could judge of these movements by the eye with any degree of accuracy When controlled by tracings taken immediately afterward it became evident not only to myself but to other members of the staff, that it was quite impossible to judge of the exact sequence of lever movements occurring within 1/5 sec of each other It is true that successive beats of the auricle do not occur within this interval but as may be seen from

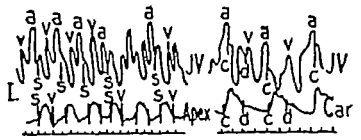

Fig 1.—Physiologic venous pulse with normal waves somewhat exaggerated owing to much distended veins, divided into 1/5 second spaces a = presystolic wave on jugular pulse s = onset of ventricular systole c = onset of wave in carotid pulse v = crest of postsystolic wave (instant of opening of tricuspid valve) j v = jugular vein car = carotid

the appended (normal) jugular tracing (Fig 1), secondary waves (v) do take place, whose time of occurrence must be most accurately estimated before these cases can be differentiated from cases of partial heart block Unfortunately, this can be accomplished only by the somewhat troublesome method of mensuration on graphic records In support of this statement may be cited the experience in the medical clinic of the Johns Hopkins Hospital during the current year where a constant effort has been made to diagnose functional disturbances of the heart by inspection of the venous pulse and then to control these by graphic records[5]

The criteria applied were as follows The observer beat time with his finger to the regular beats of the carotid pulse to accustom himself to the rhythm (Graphic records made

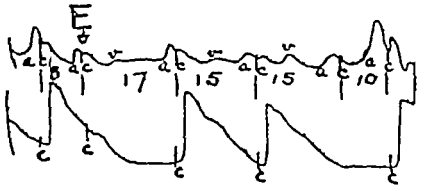

Fig 2.—Auricular extrasystoles at E Lettering as in Fig 1

to control this method of marking show that while it is sometimes absolutely accurate there are often discrepancies amounting to 1/5 sec) If at the instant when a ventricular systole was expected no beat occurred in the carotid and no first sound or only an extremely distant (auricular) one and this was accompanied by an extra wave in the jugular while the next beat fell in at the regular time, it was fair to assume that the ventricular had failed to follow one auricular contraction If, on the other hand, the first sound occurred before it was due, one was justified in assuming that an extra systole had occurred When several faint and distant sounds (not murmurs) are heard in diastole accompanied by waves in the jugular but unaccompanied by either a pulsation in the carotid or an apex impulse a high degree of heart block is quite certainly present

Extrasystoles taking their origin in the auricles can often but by no means always, be differentiated from those arising in the ventricles in the following way

Auricular extrasystoles, like the regular systoles, show a presystolic filling of the vein followed by a systolic collapse, then a second filling and, lastly, a postsystolic collapse (two fillings and two collapses) for each beat in the carotid, ventricular extrasystoles often show only one large flapping rise and fall about synchronous with the carotid pulse, the appearance being quite different from the usual jugular wave and quite characteristic Graphic records illustrating these two forms of venous papule are shown in Figures 2 and 3 Another point, also not infallible, is that the time occupied by the regular systole, the *auricular* extrasystole, and the pause before the next regular beat is often less than two regular cardiac cycles So that if in these cases one beats the time of the regular rhythm not only does the extrasystole come before the regular beat would have occurred, but the subsequent beat occurs before the second regular beat would have taken place had there been no extrasystole The entire rhythm appears for the moment altered When there is a *ventricular* extrasystole[6] (also with late *auricular* extrasystoles[7]) the duration of systole, extrasystole, and subsequent pause is exactly equal to two regular

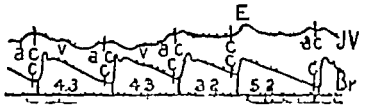

Fig 3.—Ventricular extrasystole at E Lettering as in Fig 1

cardiac cycles, and when one beats time to the regular rhythm it is observed that the extrasystole occurs before a regular beat would have come, while the next regular beat falls in at exactly the instant at which it would have fallen if no extrasystole had been present, and the rhythm is not otherwise disturbed

This distinction between the different kinds of extrasystoles is of some practical clinical importance, as it has been found that the irregularities due to ventricular extrasystoles often disappear under digitalis,[8] while digitalis often converts a case with auricular extrasystoles into one of partial heart block, and does distinct harm to the patient[9,10,11] Some experiments made in collaboration with Dr Eyster[7] indicate that conduction from auricle to ventricle is diminished with early extrasystoles, but not with those occurring late in diastole It is only with the former that the above mentioned marked disturbance of rhythm takes place so that it is probable that digitalis may be given judiciously and safely in all cases of irregularity due to extrasystoles in which systole, extrasystole and subsequent pause occupy the time of two full cardiac cycles

The disturbance of rhythm due to intermittent overaction of

[5] It is not my desire to intimate that these methods in any way supplant the graphic methods They are of use only in the absolutely typical cases and whenever the results of the observations are not perfectly sharp and unambiguous they are of no value In a large proportion of cases however the findings are typical and the clinician can save himself a troublesome encounters difficulties the principal of which is the difficulty in adjusting the receiving tambour to the jugular so as to obtain the correct movement of the lever Dr McCaskey's method suffers from this disadvantage in exactly the same degree as any of the ordinary graphic methods and yet lacks the advantage of giving a tracing which shows everything accurately In any case either to be published or in which the simple inspection method does not lead to a perfectly unambiguous observation nothing less accurate than the graphic method yields trustworthy results With my modification of the Erlanger blood pressure apparatus a tracing may be taken even more easily than a visual observation made by the method of Dr McCaskey

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the vagus (Mackenzie's "youthful type") may sometimes be differentiated from that due to auricular extrasystoles by the fact that, though there is a pause bearing no relation to the rhythm of the heart, this pause is not preceded by a premature beat or sound

We have also attempted to differentiate from inspection between the normal venous pulse and that of tricuspid insufficiency It is often impossible to determine with the eye whether a filling of the vein occurs during systole of the ventricle or just before it, so an attempt was made to adopt a criterion which it has since been learned has been sometimes found useful by Dr G A Gibson of Edinburgh The normal jugular pulsation shows, as stated above, two fillings of the vein and two collapses for each beat in the carotid The typical pulsation in tricuspid insufficiency consists of a single filling of the vein and a single collapse for each carotid cycle so that it has become customary in the wards to speak of them as the "double" and "single" types of venous pulse In most cases this criterion suffices for the diagnosis of tricuspid insufficiency (subsequently borne out by the physical findings and autopsy), but there are some notable exceptions to this rule

1 In cases where secondary elevations appeared in the venous pulse during the systolic phase, tricuspid insufficiency being present 2 In those normal cases where owing to the small amount of collapse occurring during the systolic period, only one venous wave could be seen with each carotid cycle

These ambiguities were always readily cleared up by careful measurement of the tracings obtained The clinical observations were, moreover, corroborated by other members of the medical staff[12]

Hence it would appear that, although inspection of the venous pulse may frequently yield valuable information as to the disturbance of cardiac function, it is subject to grave errors, not less serious than those incurred by omitting the use of apparatus in determining blood pressure or of the thermometer for temperature Heart block partial or complete, is a condition of too somber significance to justify physicians in failing to control their observations from inspection by the use of more accurate methods—the venous pulse tracing[13]

VISUAL METHODS IN DIAGNOSIS OF HEART-BLOCK

II A REPLY

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In availing myself of the opportunity of making a rejoinder to Dr Hirschfelder's criticism of my recent communication I wish first to say that I think his criticism is partly right and partly wrong The diagnosis of complete heart block with the auricle beating four or five times as fast as the ventricle can undoubtedly, as he says, be made without instruments of any kind In partial heart block, however, which probably always precedes the complete form the problem is entirely different We may not have bradycardia in these cases but only an irregularity caused by an occasional "block" of the auricular impulse These cases, the recognition of which is so important, can scarcely be detected without the aid of suitable instruments It might, of course be possible in favorable cases to *feel* an omission of the radial pulse or apex beat and *see* that a conspicuous venous pulsation continued without interruption This could only be due to a "block" of that particular auricular impulse, and would point to incipient heart block

With a trained and capable physiologic investigator like Dr Hirschfelder such observations might be quite reliable but the dangerous fallacy which underlies the routine clinical attempt to determine the time relations of cardiovascular events by inspection and palpation is forcibly illustrated by the history of the now exploded theory of the delay of the radial pulse in aortic regurgitation Such men as Flint Balfour and Broadbent taught the correctness of this theory Balfour stating[14] that "this delay in aortic reflex is invariable" Graphic tracings made in many cases of aortic regurgitation by Mackenzie have shown that there *is not* the slightest delay beyond the usual physiologic period, and his observations were corroborated, or anticipated rather, without his knowledge by Francois Franck and Keyt It undoubtedly does not occur

When the left ventricle contracts in cases of aortic regurgitation there is a continuous column of blood from the distended ventricle to the radial artery in a closed tube of normal size and the column must move without delay and the radial pulse be produced as we now know it to be, at once, and yet Balfour, an able acute clinician, said that the delay might be "so great that the radial pulse coincides with the ventricular systole immediately succeeding that which has produced it" What a comment this bit of history is on the correct interpretation of such events by the unaided senses! I do not wish to underestimate the value of the highly trained eye ear and finger, and I think that one of the greatest benefits of the graphic methods will be to enable the clinician to educate those senses in a school of precision heretofore unattainable He will learn by unimpeachable demonstration just what certain sensations mean, and will be able to interpret them as never before So I would urge inspection and palpation in the study of cardiac disease with greater ardor than ever, checked and guided by the graphic methods

What are the advantages offered by this "visual method over simply watching the pulsation of the jugular vein while feeling the pulse in the carotid with the finger" The facts above cited concerning the retardation of the pulse in aortic regurgitation show how misleading the direct observation of the phenomena may be It seems to me that a comparison of two parallel levers, especially designed for inspection, simplifies the matter very much They present a broad surface instead of the narrow pointed ends of the writing lever They are much longer than the writing levers on Dr Hirschfelder's modification of Erlanger's sphygmomanometer which he has been observing with the same end in view, and, therefore have much greater amplitude of motion That the observation and comparison of such levers can be more easily and more accurately made than observation of the venous and palpation of the carotid pulses seems to me clear but whether these advantages are sufficient to justify the multiplication of instruments already burdensomely numerous may easily be questioned It it could be regarded as a finality in the instrumental study of auriculo-ventricular relations it would be different But as clearly stated in my former communication such is not the case For instance a lengthening of the a-c interval (the interval between the auricular systole and the carotid pulse) is important, even in the absence of any irregularity of the ventricle as showing a partial impairment of conductivity of the bundle of His This could be detected in exceptional cases if well marked by watching the levers from the wrist [illegible] the ap

12 Preble (Insufficiency of the Tricuspid Valve in the Course of Pernicious Anemia American Jour of Med Sci 1906, cxxxii 393) reports the finding of tricuspid insufficiency in cases of marked anemia as had also v Leube Neither of these writers supported their findings by tracings from the veins nor mention having made any Many years before this Potain (La Clinique médicale de la Charité 1894) had shown by tracings that no real tricuspid insufficiency was present in this group of cases This observation of Potain is also confirmed by the recent and very careful work of H F Hering (Deutsch med Wochschr 1906 1) In those cases of marked and of pernicious anemia which have come under my observation no tricuspid insufficiency has been present In one case the venous pulse was of the single type but tracing showed that the *collapse occurred during systole of the ventricle In face of* this evidence the observations of Preble and Leube require confirmation

13 As I have stated elsewhere (see footnote 1 and also Observations on Paroxysmal Tachycardia, Bull Johns Hopkins Hosp., 1906 xvii 337) two kinds of partial heart block are to be distinguished the organic heart block due to lesion in the course of the His atrio-ventricular bundle and the failure of ventricle to follow all the impulses from the auricle due to overaction of the vagus The former type is always to be regarded as a forerunner of complete block (cf Erlanger and Hirschfelder Further Studies on the Physiology of Heart Block in Mammals Amer Jour Physiol 1 06 xv 153) The second type can be differentiated from the first only by means of atropin or some other drug which paralyzes the vagus

latter can be utilized, which is not rarely impossible It would, however, be uncertain and unreliable, while with simultaneous tracings the precise interval can be measured with perfect accuracy I use the Mackenzie polygraph in practically every case, and consider the graphic tracings so essential to accurate diagnosis that I would deeply regret if any one should on my recommendation forego these for a method which, while it has a value, is limited in its application and falls short of the requirements of scientific accuracy It was only intended to serve as a means of prolonged observation of arterial and venous pulsation, and, especially when the apex beat can be utilized, of making a preliminary diagnosis of heart block, which should, of course, be verified and studied in detail by graphic tracings

The diagnosis of heart block, even of the partial form should not, as Dr Hirschfelder remarks, be made without verification by simultaneous tracings of the venous and arterial pulse It should be borne in mind, however, that partial heart-block can be produced by other lesions than degeneration of the conductmg bundle of His—conditions from which complete recovery is entirely possible so that the "somberness" of the diagnosis of partial heart block depends on its pathology The ventricle, because of nutritional or other changes may have its irritability so depressed that it will not regularly respond to a normal auricular impulse transmitted through a perfectly normal set of conducting fibers, or, on the other hand, an impaired tonicity of the auricle may very probably initiate an impulse so weak as to be occasionally ineffective

We clinicians are more than grateful for the criticisms and scientific methods of the physiologists, for they have made possible the tremendous strides which have been made within the last decade in cardiac pathology and therapeutics

A CASE OF DOUBLE PLEURISY WITH EFFUSION

J F McGARRAHAN, M.D
COHOES, N Y

Cases of double pleurisy with effusion are seemingly rare enough to warrant the following report

Patient—M W, aged 11½ was first seen June 18, 1903

Family History—On the father's side this was negative There had been several cases of pulmonary tuberculosis among the mother's sisters, one of whom was ailing at the time this child was seen A sister of the patient had pleurisy with effusion four years before, which required early aspiration and the girl made a good recovery One brother died at 4 years of diphtheria

Personal History—The girl had typhoid fever at the age of 8 Six months before the present attack she developed a rash resembling scarlet fever, which disappeared in 24 hours The child was not very sick at the time Ten days before I was called she came home from school with fever, headache, vomiting and nosebleed A harsh dry cough quickly developed which was associated with some pain through the chest and much distress. The fever continued and breathing became much embarrassed The cough was distressing and bothered her greatly, she was unable to lie in any one position except for a short time, and had to be propped in a chair day and night There was repeated epistaxis and much prostration

Examination—When first seen dyspnea was very marked, respiration was 60, temperature 102 6 F, and pulse 160 The child was cyanosed Inspection revealed limited motion of the lower chest There was dulness on percussion, merging into flatness beginning at the angle of the scapula on the right side, and 1½ inches above the angle on the left side, and to about the fourth rib anteriorly on both sides Auscultation showed harsh breathing bronchial in character, over both sides above the area of dulness, and over this area there was fairly distinct transmission of the bronchial respiratory sounds The heart showed little displacement and no organic lesion The urine was negative

Treatment—The left chest was aspirated June 19, giving 19 ounces of light colored fluid and on the day following aspiration of the right chest gave a little over a pint of fluid of the same character Much relief followed the removal of the fluid, and the usual medical treatment—counter irritation, diuretics, an occasional saline cathartic and iodin in several of its forms—was used The thickened pleurae were rather slow in returning to normal, but under outdoor life, syrup of iodid of iron and cod liver oil, the child made a good recovery and was discharged as cured August 14 Since this time she seems healthy

MALIGNANT TUMOR OF THE TESTICLE

J B CUTTER, M D
Surgeon to the Santa Fe Coast Lines.
ALBUQUERQUE, N M.

The recent report[1] on this subject calls to mind a similar case coming under my own observation

Patient—J, a brakeman, applied to me, in May, 1906, for relief of what he had been told was hydrocele

Examination—The left testicle was found to be enlarged to the size of a lemon, it was fairly firm and not painful Operation was advised and submitted to and the left testicle was removed and found to be carcinomatous Recovery was uneventful and the man soon returned to work. A bad prognosis was given

Subsequent History—In November, 1906, the man returned for treatment and placed himself under the care of another physician, having meantime left the employ of the railroad I was called to see the patient in consultation and found in the left hypochondrium a more or less movable mass This had been gradually increasing in size and had been variously diagnosed, having been called among other things, a floating kidney The man was emaciated and typically cachectic A fatal prognosis was given in keeping with the original findings The man insisted on an operation, which was performed, he died about ten days later A growth involving the abdominal viscera of the left side was found, and no attempt at removal was made. The involvement was of course metastatic and although no microscopic examination was made it was undoubtedly carcinomatous, as was the testicle

TRIPLETS WITH ONE PLACENTA

WALTER E SCARBOROUGH, M.D
SHELBYVILLE, ILL.

Parental History—The father and mother are natives of Illinois, the father is 38 years of age and the mother 32 The mother had previously given birth to seven children, two of whom were twins

History of Present Case—I was called at 3 a m, February 1 On making an examination I found the right foot presenting The amniotic sac had not yet ruptured, so I punctured it and with the next pain the right foot descended into the vagina Delivery was easy After tying the cord I made an examination and found another sac presenting In the course of 45 minutes I ruptured it and found a breech The child was delivered, the cord tied, and another amniotic sac appeared, this I ruptured and, after 30 minutes another breech presented This delivery was more difficult than the others

Remarks—A peculiar feature of the case was the fact that there were three distinct and separate amniotic sacs and only one placenta which was delivered after the last child was born

After the third day the mother was able to nurse all three children The three—two boys and a girl—weighed together 20½ pounds

1 Rolfe (W A) A Rare Form of Malignant Tumor of the Testicle THE JOURNAL A M A Feb 9 1907

New and Non-Official Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NON-OFFICIAL REMEDIES." THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY

(*Continued from page 1031*)

(*A list of all accepted articles is published on one of the advertising pages of The Journal in the first issue of each month*)

VERA-DIASTASE ESSENCE

A liquid containing 0.130 Gm. (2 grains) of vera-diastase in each 4 Cc. (1 fluidram) of a menstruum containing 14 per cent. of alcohol, 12.5 per cent. of glycerin, with small amounts of flavoring matters.

Actions and Uses.—See Vera-diastase.

Dosage.—4 Cc. (1 fluidram).

Prepared by Frederick Stearns & Co., Detroit, Mich.

VERA-DIASTASE TABLETS

Tablets containing, each, 0.130 Gm. (2 grains) of vera-diastase, which see.

Prepared by Frederick Stearns & Co., Detroit, Mich.

CREOSOTE CARBONATE

Creosote Carbonate is a mixture of carbonic acid esters, analogous to guaiacol carbonate, prepared from creosote.

It is prepared by passing a current of carbonyl chloride into a solution of creosote in sodium hydroxide and purifying the oily product by washing with weak soda solution and with water.

It is a yellowish thick, honey-like perfectly clear and transparent liquid, containing 92 per cent. of creosote. It is odorless and has a bland oily taste. It is insoluble in water but soluble in alcohol, ether, chloroform, benzene and in fixed oils.

The addition of a few drops of ferric chloride solution to the alcoholic solution should not cause any change in color. On boiling with potassium hydroxide solution the odor of creosote is evolved.

It is incompatible with alkalies.

Actions and Uses.—Creosote Carbonate has the same action as creosote, but is claimed to be non-toxic and devoid of irritant properties. It is recommended as a substitute for creosote for internal exhibition in tuberculosis, pneumonia, and as an intestinal antiseptic.

Dosage.—From 0.3 to 2.0 Gm. (5 to 30 grains) for children, to 1 to 4 Gm. (15 to 60 grains) for adults in milk, coffee, wine, cod-liver oil or emulsion. Externally it may be applied undiluted.

CREOSOTAL

A name applied to Creosote Carbonate, which see.

Manufactured by Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York). U. S. patent No. 701,235. U. S. trademark.

CREOSOTAL-HEYDEN

A name applied to Creosote Carbonate which see.

Manufactured by Fabrik von Heyden, Radebeul near Dresden, Germany (Schering & Glatz, New York). U. S. Patent No. 701,235. U. S. trademark.

DIONIN

A name applied to Ethyl-morphine Hydrochloride, which see.

Manufactured by E. Merck, Darmstadt. (Merck & Co., New York). German patents Nos. 102,054, 107,225 and 108,075. U. S. trademark.

DIACETYL-MORPHINE

Diacetyl-morphine, $C_{17}H_{17}(C_2H_3O_2)_2NO$ = $C_{21}H_{23}O_5N$, is a synthetic alkaloid obtained by the acetylization of morphine.

Diacetyl-morphine was first introduced under the name Heroin by the Farbenfabriken vorm. Friedr. Bayer & Co. It may be obtained by heating morphine with acetylchloride, washing the product with water and dilute solution of sodium carbonate and crystallizing it from alcohol.

It is a white, odorless powder having a bitter taste, an alkaline reaction and melting at 173° C. (343.4° F.). It is practically insoluble in water or ether, sparingly soluble in cold alcohol but readily soluble in hot alcohol; it is soluble also in chloroform and in benzene. It forms salts with acids which are soluble in water. On prolonged warming with mineral acids it is saponified, splitting off acetic acid and reforming morphine.

A solution of 1 part diacetyl-morphine in 100,000 parts of water becomes distinctly turbid on addition of solution of iodine. Its color reactions are similar to those of morphine with the following exceptions: It does not liberate iodine from iodic acid and does not at once produce a blue coloration with potassium ferricyanide and ferric chloride. No blue color is produced by the addition of ferric chloride to a neutral solution (1 in 100) made by the careful addition of dilute sulphuric acid. Its solutions reduce potassium permanganate.

Action, Uses and Dosage.—See Diacetyl-morphine Hydrochloride.

ETHYL-MORPHINE HYDROCHLORIDE

CODETHYLINE HYDROCHLORIDE

Ethyl-morphine hydrochloride, $C_{17}H_{17}NO(OH)(OC_2H_5)\,HCl + H_2O = (C_{19}H_{24}O_3ClN + H_2O)$, is the hydrochloride of the ethyl ester of morphine.

The product was first introduced by Merck & Co. under the trade name Dionin. It may be obtained by the action of ethyl iodide on morphine in the presence of alkali, the basic product being purified by crystallization from hot alcohol, dissolving the crystals in hydrochloric acid and crystallizing.

It is a white microscopically crystalline powder, odorless and only slightly bitter. It is soluble in about 7 parts of water and in 2 parts of alcohol; insoluble in ether and in chloroform. It melts completely with decomposition at 125° C. (257° F.).

It gives the usual reactions for alkaloids. It is distinguished from morphine salts by its insolubility in excess of alkali and by not producing an immediate blue color but gradually developing a blue-green coloration when its solution is added to dilute ferric chloride solution containing a fragment of potassium ferricyanide.

It is incompatible with alkalies and their carbonates and alkaloidal reagents, as potassio-mercuric iodide, tannic acid, picric acid, etc.

Actions and Uses.—It is claimed that this compound acts like morphine without producing constipation, nausea or lassitude. It is the conclusion of some good observers that it possesses no advantage over codeine. Applied to the eye, it causes a local vaso-dilation, leading to acute conjunctival edema.

Ethyl-morphine Hydrochloride is recommended to relieve pain, especially in respiratory affections, as an antispasmodic in whooping-cough, for insomnia and externally in the treatment of corneal affections, conjunctivitis, iritis, etc.

Dosage.—0.015 to 0.06 Gm. (¼ to 1 grain). Externally it is applied in 10 to 20 per cent. solutions.

(*To be continued*)

Avoidable Blindness.—Hess states in the *Med. Klinik*, iii, 133, 1907, that he is confident that fully half of the 30,000 cases of blindness known in Germany were avoidable not to mention the much larger number of cases of partial impairment of vision from avoidable causes. The avoidable accidents such as from flying particles of matches, from stone throwing and the like form a long list and he suggests that it might be interesting to compile statistics of the number of cases of loss of one or both eyes from quack practice. The strict vaccination regulations in Germany have reduced to less than 1 per thousand the cases of blindness from smallpox, but in Austria—where vaccination is not so rigorously enforced—from 20 to 30 per cent. of [illegible] the blind [illegible] their blindness to [illegible]

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[For other information see second page following reading matter]

SATURDAY, MARCH 30, 1907

SCIENTIFIC WORK IN THE PHILIPPINES

The fifth annual report of the director of the Bureau of Science of the Philippine Islands, Dr P C Freer indicates considerable advance in scientific research in that country during the year The bureau has been enlarged by the incorporation of the Bureau of Mines and this has occasioned considerable crowding and inconvenience from the use of rooms for purposes for which they were not intended Difficulty has also been experienced in keeping the service of skilled investigators in the various departments, especially for positions which pay from $1 400 to $1,600 a year It would seem that the distance from home and the inconveniences of change of climate, etc, make a higher salary necessary for the beginning workers Nevertheless the work offers opportunities for advancement, both scientific and financial, which should form a strong inducement to properly equipped men from the United States

The library forms an important adjunct to scientific work and it is receiving constant additions which, on account of the lack of help at the command of the librarian, are compelled to remain without sufficient cataloguing The various investigators have established two journal clubs for the discussion of the results of research and to assist in removing that scientific isolation which handicaps the investigator in the tropics The establishment of the *Philippine Journal of Science* has been a successful means of calling the attention of scientific men in various parts of the world to the work of the bureau and of securing exchanges which are of great service in the work of the department The director now suggests that this journal be divided into three sections, one devoted to medical subjects, one to general scientific papers and the third to systematic botany and botanic subjects

Important work has been done in the division of biology in the preparation of a cholera vaccine which has been used with the apparent effect of protecting against cholera those who were inoculated In Angat, where 1,078 individuals (about one-sixth of the inhabitants) were vaccinated 122 cases of cholera appeared of which 121 were among the uninoculated and only one among the inoculated It is the opinion of those who have been actively engaged in this work that the best method of limiting or eradicating cholera in any country is that of vaccination In addition to the various serums for human diseases, the rinderpest serum has been manufactured, and the occurrence of some cases of tuberculosis among imported cattle in the islands will probably render it necessary for the laboratory to add tuberculin to its list of preparations The work of Musgrave on amebic dysentery and of Herzog on beriberi has been important, and the Army Board for the Investigation of Tropical Diseases is pursuing work in the biologic laboratory from which practical results may be expected Studies of mosquitoes have been made and the question of limiting this pest will be considered in the near future

The botanic work promises to be of commercial importance in the study of the timber and other plant products of the Philippines The use of locust fungus in an attempt to limit the spread of locusts was unsuccessful—a result which is in accord with the latest experience in South Africa The chemical department, in addition to the study of oils, gums, resins and fibers suitable for paper-making, has undertaken the study of the medicinal plants of the islands and much material already has been gathered, but a discussion of the results would be premature Mineral deposits have been investigated and the supply of Philippine coal promises to become sufficient for local use Asbestos deposits are found in Ilocos Norte, but have not yet been investigated by the bureau

MILK AND TUBERCULOSIS

The International Congress on Tuberculosis held in London in 1901 will be chiefly remembered by the startling announcement made by Prof Koch that bovine and human tuberculosis are produced by different bacilli, and that bovine tuberculosis is transmissible to the human subject to only a very slight extent, if at all This statement was a veritable "bolt from the blue" Up to that time the propagation of tuberculosis by the agency of infected milk, at any rate of milk drawn from tuberculous cows whose udders were affected, was held to have been proved beyond the shadow of a doubt The revolutionary announcement of the celebrated German professor has done far more good than harm It has stimulated research on the subject to a degree never before known, and although even now no hard and fast statement can be made, the results of the numerous investigations which have been undertaken in many countries have immensely increased our knowledge Commissions have been appointed to investigate the matter in Germany and Great Britain, and searching and exhaustive investigations have been made in the United States and Canada Independent researches have also been instituted and carried out in perhaps all the civilized countries of the world

Merely to mention the results arrived at from this mass of evidence would be impossible in the scope of an editorial It may be said, however, that German authorities generally lean more toward Koch's views than do

American and British investigators On the whole, German scientific men hold that there is a distinct difference between the micro-organisms of human and bovine tuberculosis, though many notable Germans dissent from these opinions For example, Behring thinks that the diseases are intercommunicable Prof Dungern[1] of the University of Freiburg is stated to have demonstrated that bovine tuberculosis is transmissible not only to man but to apes American students of this subject as a general rule may be said to incline to the view that human and bovine tuberculosis are intercommunicable Prof Theobald Smith,[2] however, is of the opinion that the old notion that all tuberculosis originating in the intestinal tract is of bovine origin, must be abandoned British investigators, as a rule, adhere more or less strongly to the idea that tuberculous milk is capable of directly infecting, and not infrequently does directly infect, the intestinal tract in young children With comparatively few exceptions, British medical men believe in the transmissibility of bovine tuberculosis to the human subject by means of infected milk Dr Nathan Raw[3] contends that bovine tuberculosis affects young people, is traceable to infected milk and affects the tonsils, the alimentary tract, the gland, and, through the blood, the meninges, the bones, the joints and other parts, while human tuberculosis is air-borne and affects adults by way of the lungs as in pulmonary phthisis

Recently the theory of the intercommunicability of human and bovine tuberculosis, if theory it still may be called, has received remarkable confirmation from two quarters A *Bulletin* of the Bureau of Animal Industry of the United States Department of Agriculture was issued a short time ago The researches referred to in this report were carried out by Drs Schroeder and Cotton The conclusions to which they came were most definite and very sweeping They state that as a result of their experiments they are convinced that a tuberculous cow is more dangerous to the health of man than is the human consumptive

The report of the Royal British Commission on Human and Bovine Tuberculosis, appointed in 1901 to investigate the infectivity of meat and milk of tuberculous cattle and cows to man, which has also been published recently gives results from investigations far more exhaustive than those detailed in the American publication The commission, which was carefully composed and included among others the late Sir Michael Foster Prof Sims Woodhead and two well-known veterinary experts summed up its report as follows "There can be no doubt that in a certain number of cases the tuberculosis occurring in the human subject, especially in children, is the direct result of the introduction into the human body of the bacillus of bovine tuberculosis and there also can be no doubt that in the majority at least of these cases the bacillus is introduced through cows' milk Cows' milk containing bovine tubercle bacilli is clearly a cause of tuberculosis This statement is sufficiently definite, and while, of course it will not be taken as the last word on the matter, it must carry a considerable amount of weight The experiments undertaken by the commissioners seem to have been very thorough Investigations were made in the bovine body by the introduction of bacillus of human tuberculosis, and another into the effects produced in the bovine body by the introduction under similar conditions of the bacillus of bovine tuberculosis Animals other than bovine were also experimented on Recording their conclusions in regard to experiments on anthropoid apes the commissioners stated "It is clear that the bacillus of bovine tuberculosis will, either by feeding or by inoculation, produce in even a small dose generalized progressive tuberculosis in the anthropoid ape, an animal so nearly related to man"

Further investigations into the subject, especially those by German students, will be awaited with great interest

Meanwhile it must be conceded that the preponderance of evidence is in favor of the conclusion that bovine tuberculosis is transmissible to man by milk, and hence the hygienic precautions in vogue or proposed find full justification It must not be overlooked, however that other avenues of infection are open, such as the contamination of food and drink by human tubercle bacilli, the swallowing of bacilli from dust, or articles contaminated by sputum, with which children may easily soil their fingers, and lastly inhalation of bacilli laden dust or spray While investigation may be making the inhalation theory less prominent it should not be hastily concluded that no danger is to be apprehended from such inhalation

1 Lancet Nov 4 1905 p 1270
2 Boston Med and Surg Jour Jan 18 1906
3 Lancet Aug 5 1905 p 303

THE BORDERLAND IN MEDICAL LIBRARIES

The medical library movement is assuming promising proportions in this country In almost every city of fifty thousand inhabitants and in a number of even less population some such project is being vigorously pushed Certain side issues in the matter seem worthy of having attention directed to them Not only are books relating to medicine sure to be of interest to the next generation but all books relating to medical affairs of any kind especially to physicians themselves and all books written by physicians though on non-medical topics can scarcely fail to be of interest As a matter of fact while old editions of text-books have only exceptionally any interest after a revised edition has been issued these other books maintain their value from the historical standpoint In this respect, it is well to remember the change that has come over the attitude of libr and book collectors with regard rth kinds Many of the old m d general libraries would l d

contained the advertisements which originally appeared in them, but which were removed by the binders

For library purposes advertisements are now carefully bound in with the reading matter proper, and this method will probably obtain in the future in medical libraries Many pamphlets and other publications relating only indirectly to medicine, but showing in any way the temper of the times toward physicians, or toward medical questions, will be of distinct significance Books written by physicians, no matter what the subject, should find a place in medical libraries since they will provide an excellent picture of the occupations of physicians of this and preceding generations, during the moments which they stole from their life work for their pleasure A goood library collection of works written by physicians, or men closely associated with the medical profession, would contain a large number of works representing valuable contributions to literature For instance, Dante's works would have to be among them, for he was a member of the guild of the apothecaries in Florence, and Copernicus' works must find a place, for he was a practicing physician as well as an astronomer, and Locke's works, for he was a physician first and a philosopher afterward These are only some of the greater names, but it would not be hard to mention others In our own generation some excellent literary work has been done by physicians and in America such names as those of Oliver Wendell Holmes Robert Joyce, and S Weir Mitchell tell us of men whose literary achievements reflect the highest honor on the profession

In the hurry of practical life this feature of medical libraries is in danger of being neglected, and it will be a distinct loss to future generations if it is, for, as a rule, it is not hard to make collections of such books, and once they have been shelved, they remain for all time A list of books by physicians relating to non-medical subjects would be of great interest and if some one could but find the time to prepare such a document, it would prove an excellent guide and doubtless would direct attention to what can be accomplished in this matter This department need not at all interfere with the collection of the more practical and more urgently important works on medicine, yet it will add greatly to the interest of libraries and their attractiveness for medical men, especially when the library is housed in a building by itself that has something of the nature of a club-house

CITY EXECUTIVES AND FRAUDULENT CONCERNS

A jewelry firm selling goods by auction in a neighboring city was recently put out of business by the city executive because of charges preferred against it by the Jewelers Association The basis of the accusations against the company was that of misrepresenting the wares sold The action taken was a good one and reflects credit both on the city administration and the business association bringing up the matter A medical journal[1] published in the same city asks pertinently, what would happen if the physicians there should offer a protest against the advertising medical concerns of that city That these are more guilty of fraud and deception that any jewelry auctioneer could be goes without saying, that they, instead of merely depleting the purse, play fast and loose with the health and lives of their dupes is also evident Yet not many city executives could be found who would, on the protest of the reputable physicians of that city, put the ubiquitous "medical institutes" and advertising quacks out of business Whether the moral support given such concerns by the daily press of the city has anything to do with the lack of enthusiasm usually exhibited by city officials under such conditions is a question that the unbiased observer will be forced to ask

THE DANGERS OF PATHOLOGIC WORK

Pathologic and bacteriologic laboratory research have their perils, as is every now and then demonstrated by the death of some prominent worker in this field The latest victim to the cause of science is Dr Allan Macfadyen[2] This eminent English bacteriologist, so well known by his work on endotoxins, etc., succumbed to an accidental laboratory infection Medical history has a long roll of such martyrs, and it is probable that enlistment in this department of scientific service involves not much less risk to life or limb than does the taking up of the profession of the soldier in the present stage of the world's history Of course, every physician runs certain risks and may be called a soldier of humanity, risking his own health and life for the defense of others But laboratory workers, and especially those investigating the causes of virulent infections, take special risks and can not always avoid their consequences Formerly cadaveric blood poisoning was almost the only recognized peril of the pathologist, others being incurred unknowingly if at all It requires perhaps greater courage to investigate disease when we know that such study involves the handling and cultivation of micro-organisms of the most virulent type It may even require the direct incurrence of infection in the study of pathologic conditions as yet not fully understood, but none the less formidable It seems to be in the order of things that every little while some especially valuable life, like that of Dr Macfadyen, must be sacrificed in this way

SANITATION VS INFECTION ITS LIMITATIONS

The recent epidemic occurrence of certain infectious diseases in some parts of the country has caused naturally much newspaper comment and some criticism even by physicians, of the ill success of sanitary boards and officials in preventing such outbreaks Of course we can hardly expect anything else The public does not take a judicial view of such matters or recognize the unavoidable conditions that sanitarians have to meet Modern science has given us the mastery over certain diseases Smallpox and typhoid fever should be non-existent, that

1 Wis Med Jour January 1907
2 THE JOURNAL A M A March 23 1907 p 1053

they do occur is the fault of the general obstinacy of a large section of the human race There are still some diseases that are not under control, such, for example as scarlet fever with its wide range of symptoms from an almost unrecognizable ailment to a rapidly fatal disease, its capricious contagion, the varying immunity to its infection, and our ignorance as to its germ One can appreciate the difficulties that must necessarily be met in its ideal prophylaxis and suppression There is probably no epidemic of scarlet fever in which there are not many walking cases innocently spreading the disease, and some of them perhaps incapable of positive diagnosis by any means at our command The immunity of many adults is possibly due to their having had the disease in this unrecognized form in early life Hence the practical impossibility of eradicating the disorder with our present ignorance of its causal organism and its life history There are other disorders that are likewise protean in their manifestation and more or less impossible in their prophylaxis, but scarlatina is perhaps as striking an illustration as any other disorder of some of our present limitations In the meanwhile we can only restrict the spread of the disease by isolation, disinfection, etc, wherever possible, recognizing the fact, however, that Eddyism, ignorance and recklessness on the part of the public will counteract much of our best effort It is to be hoped that the elusive germs of this and many other disorders will before long reveal themselves to the workers in our pathologic institutes, or at least that enough may be learned to leave only matters af academic interest still unknown, as in the case of smallpox and yellow fever The statement of such facts as these may seem a little platitudinous to medical men, but there is sometimes, even in our profession, a tendency to ignore them

CEREBROSPINAL MENINGITIS

According to reports received from Great Britain, cerebrospinal meningitis has broken out in Belfast, has assumed an epidemic form in Glasgow, and has shown itself in Edinburgh and other Scotch cities, some cases having occurred as far north as Inverness Great Britain has been singularly free in the past from large epidemics of this disease, epidemics have occurred on a small scale, and in recent years sporadic cases have appeared in widely separated parts of the country The disease has manifested itself in Belfast in Ireland on a fairly wide scale, and shows few signs of abatement The death rate has been about 50 per cent. A serum, the joint discovery of Professor Kolle of Berne University and of Professor Wassermann of Berlin, which is claimed to have proved efficacious in Europe, is being used in Belfast, but no reliable data as to results have been yet forthcoming In Glasgow cerebrospinal meningitis is said to have been simmering for a considerable period, and a year ago the authorities resolved to place the disease on the notifiable list During the past few weeks the cases of this disease have increased both in number and virulence and it is stated that in 50 per cent of the cases the patients were under 5 years of age One or two cases have occurred in London and a few cases are reported from Dublin Some useful knowledge concerning the disease was gained by physicians at the time of the New York epidemic in the spring of 1905, and it may be assumed that American physicians know more in regard to the disease and its treatment than do their British confrères As a matter of fact, however, our knowledge of cerebrospinal meningitis and especially of its effective treatment is elementary There is no specific for this disease nor do remedies of any description appear to exert much salutary influence on its course In some cases lumbar puncture is said to have a beneficial action while in others the operation has been of no avail Injection of diphtheria antitoxin was tried in several instances in New York in 1905, but the results were not such as to raise any enthusiasm Osler[1] advises the application of cold to head and spine and also suggests the application of wet cups to the neck in order to relieve the intense pain in the head Reports from Belfast in regard to the effect of the serum now being used on patients suffering from cerebrospinal meningitis will be awaited with interest

NOSTRUM ADVERTISEMENTS ON DRUGGISTS' WRAPPING PAPER

What a delightful situation for the physician who has written a prescription to have the druggist hand out the medicine called for wrapped in a circular extolling the virtues of a nostrum for the relief of the condition for which the patient consulted the physician, and declaring that physicians often fail to understand this condition, but that the company's Royal Balm is never known to fail It is a wonder that a protest against this measure is not more often raised As has been noted in our news columns, the Cass County (Ind) Medical Society at a recent meeting felt strongly enough on this subject to pass resolutions asking druggists to cease this objectionable practice To back up the request the society offered to furnish plain wrapping paper if the druggists wished them to do so The matter is worth the attention of other societies

AIDING THE TUBERCULOUS

The fight against tuberculosis becomes more strenuous each year and not a month passes but some new organization is formed for the purpose of aiding the consumptive in his fight against the disease A sixteen-page pamphlet, entitled *Relief,* issued by the St. Louis Society for the Relief of Consumptives, is one of the latest agents in this field It contains many hints of value to the sufferer and gives much information regarding the conditions under which the consumptive poor live The object of the society is not to aid in the prevention of tuberculosis—there are other societies doing that—but 'to look after the interests of the consumptives of St Louis, not otherwise provided for

1 Brit Med Jour 1903 ii 1740

Medical News

COLORADO

Must Remove House Tents.—The Fire and Police Board of Denver, on March 11, issued an order that all house tents in the city limits must be removed It is said that there are thousands of house tents in Denver, a large portion of which are occupied by consumptives

Do Not Desire Publicity—At a recent meeting of the Boulder County Medical Society, the secretary was instructed to request the newspapers in the county to refrain from printing the names of any members of the society in connection with any cases to which they had been called professionally

Medical School Removal Bill Wins—On March 7 the House of Representatives adopted, by a vote of 51 to 10, the bill presented by Mr Healy of Boulder, to allow the last two years of the medical course at the Colorado State University to be given at Denver The bill provided that no additional expense should be saddled on the state by the change

ILLINOIS

Schools Closed on Account of Smallpox—It is stated that smallpox, which is reported prevalent among the suburban towns along the Rock Island Railroad has caused the closure of the Calumet high school, whose 200 pupils have been directly exposed to infection

Internes in Eye Hospital—The Illinois Civil Service Commission is to hold examinations for surgeons, pathologsits and internes in the Illinois Charitable Eye and Ear Infirmary April 16 Applications should be addressed to the commission at Springfield before April 13

Joint Society Meeting—At a joint meeting of the Vermilion, Piatt and Champaign County medical societies held at Champaign recently, 53 members of the three societies were present and the visiting physicians were entertained at supper at the Hotel Beardsley At the evening session Dr Charles E Wilkinson, Danville, vice president of the Vermilion County Medical Society, presided

Reorganization of Hospital Staff—The directors of the Brokaw Hospital, Bloomington, have adopted a resolution declaring that as a considerable number of the members of the staff have lost interest in the work and aims of the hospital, the medical staff is dissolved, with a view to future organization of a staff with smaller membership and on such lines as will inspire greater interest on the part of its members

Personal.—Dr Ernest B Mammen and daughter Bloomington, expect to sail early in April for Europe, via the Mediterranean ——Dr David T Douglas Colfax, expects to sail for Europe about April 1 ——Dr Archibald E Franklin Aurora who has been ill for several weeks past with cirrhosis of the liver, has gone to Canada ——Dr Lawrence R Ryan, Galesburg has returned from an extensive trip through the western and southwestern states

Legislative Matters—The house committee on license considered, on March 20, the itinerant medicine peddlers' bills known as senate No 341 and house No 474, to which reference was made in THE JOURNAL of March 16 and 23 A representative of the State Board of Health was present to oppose the passage of the bills The hearing was deferred until April 3 when action will be taken by the committee The legislative committee of the state medical society and the State Board of Health have sent communications to the physicians of the 34 counties represented by the members of the license committee urging that the passage of these bills be opposed in the interest of the public health The antivivisection bill (senate No 267, see THE JOURNAL of March 16) and the osteopathic bills (house Nos 318 and 319) abstracted in THE JOURNAL of March 9 have been favorably reported by the committees to which they were reported The legislative committee of the state medical society has sent out a letter to the physicians of the state urging their opposition to these bills The other osteopathic bills, mentioned in THE JOURNAL of February 9 viz., senate No 21 and house No 66 are apparently slumbering in their respective committees but may resume activity at any day The State Board of Health bill (house No 568) amending the provisions of the sanitary act of 1877 is now on final passage in the House of Representatives The State Board of Health has had introduced a bill making necessary amendments to the medical practice act This bill which has been approved by the committee on public relations of the Chicago Medical Society, is in the committee on sanitary affairs of the House of Representatives

Chicago

Personal—Dr Henry B Favill has been elected director of the Chicago Relief and Aid Society ——Dr Alfred C Girard, brigadier general U S Army, retired, has been appointed librarian of the medical department of the John Crerar Library He is now rearranging the library, especially the Senn collection so that it may be made more easily accessible to the profession

Senn Lectures—Beginning April 3 Dr Nicholas Senn will lecture on military surgery every Wednesday at 5 p m at Rush Medical College, taking up in succession ancient and medieval military surgery the period of awakening of military surgery, the dawn of modern military surgery, and the evolution of the military surgeon To these lectures military surgeons and the medical profession at large will be welcome

Ambulance Service—During the first four weeks of the ambulance service under the supervision of the health department 915 calls were responded to by the ambulance surgeons, 577 ill and injured were removed to hospitals, 296 individuals received first aid, and of this number 99 were taken to their homes, 67 patients with contagious diseases were removed to the county and other hospitals, 49 miscellaneous cases, including 5 insane and destitute persons were cared for, and 915 individual reports were received and filed by the medical inspector

Deaths of the Week.—The deaths for the week ended March 23 numbered 700, 16 more than for the previous week and 145 more than for the corresponding week of last year the respective annual death rates being 17 29 16 92 and 14 10 per 1,000 Of the increase in deaths as compared with last week 15 were due to nephritis, 27 to consumption, 3 to diphtheria 15 to nervous diseases, 6 to scarlet fever, and 4 to typhoid fever Pneumonia as is usual at this time of the year, led the death causes with 137, followed by consumption, with 104, heart disease, with 57, nephritis with 55, nervous diseases, with 34, violence (including suicide), with 33, cancer with 27 scarlet fever and acute intestinal diseases, each with 24, and bronchitis, with 20 The first death from smallpox since September, 1905, occurred during the week, an unvaccinated child whose case was mistakenly diagnosed as measles

INDIANA

Reception for Faculty and Graduates—A reception was given to the faculty and graduates of the Indiana Medical College at Neuronhurst March 16 Dr Mary Spink and other members of the faculty received the guests Dr Fletcher's residence was thrown open for a smoker and there was dancing in the gymnasium

February Disease and Death—Influenza was the most prevalent during the month and then in order followed bronchitis, pneumonia and tonsillitis Scarlet fever was seventh in area of prevalence and diphtheria tenth Twelve schools were closed on account of scarlet fever but during the month only six deaths occurred from that disease One death occurred from smallpox 241 cases of disease were reported in 25 counties, while in the corresponding month of 1906 152 cases in 15 counties were reported Typhoid fever was present in 45 counties 312 cases being reported, with 46 deaths There were 131 cases of diphtheria, with 30 deaths, reported from 37 counties Pneumonia caused 664 deaths, or 261 more than in the corresponding week of 1906 The record shows a greater prevalence of sickness and higher death rate for February than for the corresponding month of 1906

Personal.—At the annual meeting of the Physicians' Defense Company, Fort Wayne, Dr Miles F Porter was re-elected president ——Dr Zachary T Funk is seriously ill at his home in Corydon ——Dr John M Nickles Sellersburg is in Florida on account of his health ——Dr Jas H Ford, Indianapolis, has been elected medical director of the Jefferson Life Insurance Company in that city ——Dr J W Vizard, Pleasant Mills, representative in the legislature from Adams County, was presented by his fellow members with a set of surgical instruments in appreciation of his services to them ——Dr Walter S Fowler Bluffton sails from New York with the Wellman expedition April 4 ——Dr Edward J DuBois, assistant in the laboratory of the Indiana State Board of Health, will enter Harvard University for special work in bacteriology early in April ——Dr Frederick P Buche Richmond, has been ap

pointed a member of the medical staff of the Reed Memorial Hospital in that city——Dr John N Hurty, Indianapolis, secretary of the State Board of Health, has had his salary increased from $2,400 to $3,000 a year

MARYLAND

Baltimore

Damage Suit Lost—The heirs of the late Dr P H Reiche who sued the City Railway for $100,000 on account of the death of Dr Reiche, had an adverse verdict rendered in the Circuit Court It is said that they will carry the case to the Court of Appeals

Personal—Dr Newdigate M Owensby, chief of the medical staff of Bayview Asylum, in charge of the insane, sailed for Europe March 27——The following are candidates for the city council Drs H. Edward F Grempler, Tilghman B Marden Joseph E Muse John H Groshans and George Heller ——Prof Joseph P Remington addressed the Baltimore Pharmaceutical Association March 20 on proprietary remedies and the relations of the medical and pharmaceutical professions Many physicians were present.

MASSACHUSETTS

Epidemic Diseases—Out of 80 cases of scarlet fever reported to the Gardner board of health since January 1 20 have been fatal, and out of 18 cases of diphtheria during the same period two children have died

Laboratory for Food Study—The executive committee of the Carnegie Institution, Washington voted to establish a laboratory in Boston at a cost of $100,000, to carry out exhaustive research of the nutritive value of food

To Clean Boston Harbor—The House of Representatives has taken the first step looking to the ultimate cleaning of Boston harbor by passing the order introduced by Representative Hoag directing the State Board of Health to report to the next General Court as to the best means to prevent the further pollution by discharge of sewage at Moon Island.

Personal.—Dr John A Leitch has been appointed town physician of Andover——Dr Victor A Reed Lawrence, is convalescent after a long illness——Dr Thomas M Durell Somerville, medical examiner of Middlesex, was seriously injured in a runaway accident recently He was removed to the Somerville Hospital——Dr Nathaniel L Berry has resigned as city chemist and bacteriologist of the Lynn board of health, to take effect April 1

Hospital Notes—The trustees of the Boston City Hospital have petitioned the city council that East Concord Street between Harrison Avenue and Albany Street, be closed to all heavy traffic This part of the street bounds the hospital grounds on one side——The mayor of Boston has recommended an appropriation of $83,000 as a new fund for the support and care of the feeble minded, and the matter has been referred to the committee on appropriations of the board of aldermen

State Colony for Insane—The annual report of the State Colony for the Insane showed that at the beginning of the year there were 152 male and 101 female patients, a total of 253 During the year 184 were admitted, making the total number of patients in the colony at the close of the fiscal year 403 278 of whom were men and 125 women During the year 445 patients were cared for, 312 men and 133 women Of these 34 men and 8 women were discharged, 2 as recovered 3 as capable of self support 1 as improved and 1 as not improved Twelve men and 8 women were transferred to other institutions and 6 men died from chronic diseases Supt Joseph B Howland recommends that the senate be asked to make an appropriation for water supply, feed barn and stable also that he be given permission to establish a burial ground on the colony land.

MICHIGAN

Medical Building for Detroit—At a meeting of the Wayne County Medical Society March 16, plans were formulated for the erection and maintenance of a building to be used for meetings of the society medical library and other uses of the profession The matter was referred to a committee of seven of whom Dr Charles C Jennings is chairman

Personal.—Dr Ernest L Shurly, Detroit who has been spending the winter in Europe sails for home April 5——Dr Ernest F Crummer has been elected president of Essexville ——Dr Albert M Barrett has been appointed professor of psychiatry and neurology at the University of Michigan and placed in charge of the neurology clinics at the University Hospital——Dr Albert H Steinbrecher Detroit has returned from Europe

MISSOURI.

In Memory of Dr Hodgen.—The St Louis Medical Society of Missouri decided to commemorate suitably the memory of the late Dr John T Hogden, whose death occurred April 28 1882 The following committee was appointed Drs Warren B Outten, chairman, Charles D Stevens secretary, George Homan Frank J Lutz, H C Fairbrother (East St Louis) John B Shapleigh H C Dalton A. E Ewing and B M Hypes It is proposed to make the event an exceptional one in character, as Dr Hodgen was a commanding figure in the profession and made a deep impression on his colleagues as a practitioner and on his students and classes as a teacher

Legislative Enactments—The committee on public health and legislation have reported to the St Louis Medical Society of Missouri their success in having passed by the state legislature the "abortion bill," providing for the punishment of all parties concerned in producing criminal abortion also a bill providing for the admission as evidence of the ante mortem statement of women following an abortion for the prosecution of the abortionist A bill was also passed amending the penal clause of the medical practice act, which will give the State Board of Health power to revoke the licenses of charlatans, who, owing to certain flaws in the wording of the act, had been immune from punishment A pure food bill was also passed which is identical with the national Food and Drugs Act A bill has been passed empowering the health commissioner to regulate "private hospitals" "baby farms" etc. In fact owing to the activity of the committee, all bills asked for were passed, with one exception

NEW YORK.

Venerable Medical Society—The Medical Society of the County of Westchester has celebrated its one hundred and tenth anniversary by a dinner at the Hotel Astor The society was organized in 1797 and is said to be the oldest organization of its kind in the United States Dr H Beattie Brown of Yonkers presided and 123 Westchester physicians were present

Roosevelt Hospital Asks Hearing—The Huth hospital bill has been recommitted to the cities committees for a hearing through the influence of *Roosevelt Hospital* This bill advocated by Coroner Harburg was intended to eliminate the alleged practice of some hospitals in New York City of transferring patients about to die to public hospitals in order to keep down their own death rate

New York City

Smallpox in Steerage—A case of smallpox was discovered in the steerage of the Hamburg American liner *Pennsylvania* which prevented her leaving quarantine or landing passengers There were more than 2 000 steerage passengers on the vessel all of whom must be vaccinated

Legacies to Hospitals.—*By the will of the late Francis P* Furnald the trustees of the Presbyterian Hospital will receive on the death of the testator's wife $100 000 which is to be spent in maintaining beds for wealthy applicants——The Bethany Day Nursery will also receive $100 000 in memory of Mrs Furnald

Personal—Dr and Mrs Frederick Could and Dr and Mrs Joseph Miller sailed for Rotterdam on March 20 on the *Nieuw Amsterdam*——Dr Henry W Frink a member of the second surgical division of Bellevue Hospital has been operated on for septicemia and is still in a critical condition—— Dr Bernard Lazarus while making a professional call was *robbed of $107 and his watch worth $150*——*On March 8* Dr William B Cook was called in a similar way and lost $500 and a watch worth $125

Federation of Charities—The directors of the Jewish Institutions in the city came together March 21 to discuss the Federation of Contributors to Jewish Communal Institutions which was organized a few months ago The idea of the federation is that all moneys donated to charities be given in charge of the federation for distribution as it should see fit Since the federation has been organized $117 000 has been subscribed which was $66 000 more than was given by the same subscribers before the existence of the organization [illegible] opposed the federation on the ground that a contributor should be allowed to designate the disposition of his money

Health Board Takes Decided [illegible] Board of health [illegible] for many years recommended [illegible]

all milk not certified that was used in the feeding of infants The department has done everything in its power to extend the usefulness of the Strauss milk depots and had provided in its sanitary code for the sale of pasteurized milk Dr Darlington also called the attention of the board at its last meeting to the fact that unless his corps of inspectors was increased so as to enable him to make inspection of general herds equivalent to certification, he should be compelled to take a stand compelling the pasteurization of all milk entering the city and not certified The department passed a resolution defining the line between true and commercial pasteurization, which demands that all milk be labeled to show whether true pasteurization has or has not been employed The resolution calling for reports regarding the health of employés and their families was also passed

Health Resolutions—The following resolutions have been adopted by the Section on Public Health of the New York Academy of Medicine

Resolved That the Section on Public Health recommends that the New York Academy of Medicine urge on the Department of Health of New York City the following requirement, namely that the inspectors of the Department of Health observe the same precautions as to clothing and personal disinfection when their duties bring them into contact with communicable diseases as are required by the physicians in attendance at the Willard Parker Hospital

Resolved (1) That the Section on Public Health of the New York Academy of Medicine does not believe in the necessity of the compulsory pasteurization of all of the milk supply of New York City but recommends for the present to all those whose milk can not be proved to be thoroughly inspected and wholesome and mainly the milk destined for the feeding of infants unless it is certified to boil their milk when delivered in the morning for three minutes

Resolved (2) That the health of the City of New York demands a persistence in the policy of supervision of farms, dairies and creameries supervision of all the milk during transit and on delivery in the city and supervision at the points of distribution in the city to the consumer whether the milk that is distributed has been pasteurized or not

Resolved (3) That local and state health authorities and the Bureau of Animal Industry of the United States Department of Agriculture should cooperate with the milk producers to prevent the occurrence of communicable disease in cattle and their caretakers

Resolved (4) That the Section on Public Health recommends that the New York Academy of Medicine adopt the above resolutions, and that a copy be sent to the members of the Committee on Public Health of the Board of Aldermen to the Committee of the New York State Legislature having under consideration the Reece bill and to the medical and the lay press

NORTH CAROLINA

Class Returns to College—The sophomore class of Leonard School of Medicine Raleigh which was suspended because of its opposition to the disciplining of one of its members, has returned to college accepting unconditionally the terms of the faculty

Personal—Dr Richard H Lewis, Raleigh, secretary of the State Board of Health, has recently been re elected secretary of the State Audubon Society——Dr George W Long Graham, formerly president of the state medical society, will deliver an address to the graduates in medicine at the State University next month——Dr Alpheus E Disosway, Plymouth, has been appointed surgeon of the North Carolina Naval Reserve, with the rank of lieutenant

OHIO

Communicable Diseases.—The public schools of Wakeman have been closed on account of scarlet fever——There is much scarlet fever in Mt Vernon——The State Reformatory has been placed under quarantine for two weeks on account of smallpox——At Canton two cases of smallpox have been discovered——Spinal meningitis is reported in and near Castalia, where 10 cases have been reported up to March 1 with seven deaths——Measles is reported to be epidemic around Piqua and at Bowlusville and Springfield, where about 75 cases are reported

Merger of Medical Schools—The consolidation of the Ohio Medical University and the Starling Medical College, Columbus has been consummated and a charter has been issued to the combined institutions under the name of The Starling Ohio Medical College The board of trustees of the combined institutions as as follows President, Drs W O Thompson of the Ohio State University, Charles S Hamilton, William J Means Charles F Clark, Andrew J Timberman, Thomas C Hoover John L Brown, Frank Winders, Messrs William R Lazenby, Edgar B Kinkead, Fred J Heer and H J Booth Dr Thompson has been elected president and Dr William J Means treasurer

Personal—Dr Robert C Longfellow Toledo, has completed and moved into his new laboratory, the Toledo Clinical Laboratory——Dr and Mrs William B Van Note, Lima, are taking a trip to Cuba——Dr W A Welch, Canton, has been appointed a member of the medical staff of Newburgh Insane Hospital——Dr Harry W Blair has been made health officer of Mount Vernon——Dr William F Emery, Ashland, has been elected censor of the Ashland County Medical Society to fill a vacant term——Dr Vogt G Wolfe, Urbana, was operated on at Grant Hospital, Columbus, March 15, for appendicitis——Dr Edwin J Emerick, Columbus, on March 19 was elected superintendent of the Columbus State Hospital for Feeble Minded Youth, vice Dr Estelle H Rovick, resigned——Dr S M Sherman has been appointed a member of the State Board of Health for five years——Dr Charles H Clark Washington, D C., was elected superintendent of the Newburgh Insane Asylum, March 20, vice Dr Adams B Howard resigned——Dr Arthur G Hyde, Rowe, has been appointed assistant physician at the Cleveland State Hospital——Dr and Mrs John E Myers, Springfield, are taking a trip to California——Dr I H Hague, Shreve, is reported to be critically ill with cerebral hemorrhage——Dr George D Upson, Cleveland is recovering from an operation for appendicitis at the Charity Hospital——Dr Theron S Wilson Findlay, has been elected censor of the Hancock County Medical Society

PENNSYLVANIA.

Typhoid Epidemic.—Typhoid fever is epidemic in the village of Trainer, near Chester Two persons, an adult and a child, are dead, and several men, women and children are suffering with the disease

Examination for Internes—An examination for the appointment of two resident physicians for the Easton Hospital, Easton, Pa, will be held at the hospital on Saturday, April 6, 1907, at 11 a m

Inspection of Hospital—State Senators Thompson, Gerberich and Wilbert visited the Pottstown Hospital March 16, to inspect the institution and to investigate the claims made for $15,000 state appropriation for maintenance and $5 000 toward a new surgical ward They were satisfied with the business like appearance of things, but said that there were too many free patients and not enough cash subscriptions to maintain the hospital

Bill to Prohibit Establishment of More Hospitals in Philadelphia—Representative Stradling has introduced a bill in the legislature to prevent the establishment of any more hospitals in built up sections of Philadelphia Mr Stradling explained that it was intended to revive a statute repealed in 1895 through the efforts of Mayor Ashbridge, when it was desired to move the Municipal Hospital to its present location That purpose having been accomplished, he believed that it is in the interests of the city to replace the restriction

Philadelphia

Society Elects Officers—At its recent meeting the Philadelphia Neurological Society elected Dr Alfred Gordon, president, and Dr T M Weisenburg, secretary, for 1907

Assistant Bacteriologist Appointed—Director Coplin has appointed Dr Evelyn Witner, Germantown, to be second assistant bacteriologist in the bureau of health The vacancy was caused by the recent resignation of Dr Mary F Pennington, who will engage in private bacteriologic work

Children's Ward Dedicated—The dedication of the new children's ward of the Methodist Episcopal Hospital took place March 20 It was recently built at a cost of $7,700 and has room for 40 beds The ward is not yet occupied and is the first separate accommodations for children the hospital has had

Twenty-fifth Annual Banquet of Medical Class—Sixty physicians, members of the medical class of 1882 of the University of Pennsylvania, held their twenty fifth annual banquet March 19 Dr Horace Jayne presided Dr James Tyson was the guest of honor Dr Tyson is one of the three surviving members of the faculty at the time of the 1882 graduating exercises Historical sketches were read by Drs Judson Daland and William Johnson Taylor

Bequests—According to the will of the late Frederick Bauer, $100 is left to the German Hospital——The will of Mary A Parker devises $1 000 to the Episcopal Hospital——According to the will of Samuel Elkin, the Jewish Hospital receives $5 000, the Jefferson Hospital, operating department, $3 000, the Episcopal Hospital $5,000 Presbyterian Hospital $5,000, St. Agnes' Hospital $5,000, and the Home for Crippled Jewish Children $10,000

Deaths—With 688 deaths reported to the bureau of health in the week ended March 23, the number for any other week this winter is largely exceeded These figures show that there were 97 more deaths than in the corresponding week of last year and 33 more than the number reported in the previous week. There were 111 deaths alone from pneumonia which with other diseases of the lungs caused the increase in the death rate, 136 new cases of typhoid are reported, a decrease of 107 as compared with those returned last week

Symposium on Standard Remedies vs Nostrums—A symposium on standard remedies as against nostrums will occupy the regular stated meeting of the Philadelphia Branch of the American Pharmaceutical Association, to be held at the College of Physicians April 2, 1907, at 8 p m Dr M S Mussell will read a paper on "Simplicity in Medication and the Evident Duty of the Pharmacist" I V S Stanislaus, Ph G, will speak on "The Need for Discouraging the Use of 'Patent' as Well as Proprietary Medicines" Dr N Clayton Thrush will speak on "The Value of U S Pharmacopeial and N F Preparations as Compared with Proprietaries," and Joseph P Remington, Ph D, on "The Exhibition of U S Pharmacopeial and N F Preparations at the Coming Session of the American Medical Association"

The New Frankford Hospital—The return of a committee which visited Harrisburg during the past week has strengthened the hope of the people of the suburb of Frankford regarding the appropriation of $140,000 desired for the Frankford Hospital Of this $100,000 is to complete the new building now in course of erection and $40 000 for two years' maintenance The report of the hospital, recently issued, shows that during the past year 14,146 cases were treated, against 13,914 for the previous 15 months In order to provide for this increased demand the capacity of the building was taxed to its utmost In the accident ward 1,947 cases were treated and 464 medical and surgical cases were admitted to the hospital Of this number 381 patients were treated free of cost In the dispensary 2,799 new patients were treated Last year the trustees of the hospital purchased as a site for the new building the property at the southeast corner of Frankford Avenue and Wakeling Street and the house is now being remodeled for an administration building, private wards, quarters for physicians and nurses and a temporary operating room In the rear of this building a modern two story building is being erected for a dispensary ward and for general hospital purposes. It is hoped that it will be completed by the early part of July, when the hospital will celebrate its fourth anniversary

TENNESSEE

Epidemic Diseases—The health officer of Pulaski County reports three cases of smallpox near Chattanooga——Several new cases of smallpox are reported near Dresden——Measles is reported to be epidemic in Memphis

Personal.—Dr Charles A Abernathy Pulaski, has been appointed a member of the State Board of Medical Examiners vice Dr Robert Pillow Columbia——In the suit of Dr Andrew M Trawick against the Nashville Railway and Light Company for personal injuries he has been given a judgment for $7 000——Dr Bennett C Henning Memphis recently suffered severe bruises in a collision between his carriage and a street car——Dr William B St *John, Bristol,* is visiting in Los Angeles——A defective flue in the residence of Dr John R Fowlkes, Greenfield, caused the destruction of the house by fire

Medical Societies Meet.—At the annual meeting of the Memphis Shelby County Medical Society March 19, Dr Alexander Erskine Memphis was elected president Dr George R Livermore Memphis vice president Dr J Wesley Price Memphis secretary (re elected) The following delegates were elected to the State Medical Association Drs Louis Leroy and Max Coltman Memphis and Elgin K Leake Collierville alternates Drs Newton P Raines and John L Telks, Memphis and William H Baldwin New South Memphis——The Obion County Medical Society at its annual meeting elected the following officers President Dr David M Pearce Union City vice president Dr Philip N Matlock Masonhall secretary Dr Marvin V Blanton Union City treasurer Dr James M Rippey Union City censor Dr Virgil I Jernigan Obion delegate to state medical association Dr Marvin V Blanton Union City and alternate Dr Virgil I Jernigan Obion——Roane County Medical Society at its annual meeting held in Harriman March 15 elected the following officers President Dr Joseph I Waller Oliver Springs vice-president Dr John Roberts Kingston secretary Dr George C C Givan, Harriman (re elected), treasurer Dr Charles W Greene, Harriman (re elected) delegate to the state medical association, Dr George C G Givan, Harriman, alternate, Dr John Morgan Clack, Rockwood

TEXAS

Yellow Fever on Steamer—A case of yellow fever was discovered on the British steamer *Basil* which arrived in port March 16, nine days out from Para Brazil The patient was conveyed to St Mary's Infirmary, where he died The steamer was thoroughly fumigated and placed under guard in quarantine the required six days to determine whether there were any other cases

Personal.—Dr L O Dudgeon formerly of Galveston, physician at the San Pedro mine, Mexico, for the last two years, was thrown from a street car in a railway accident and sustained a compound comminuted fracture of the pelvis and severe scalp wounnds——Dr John S Berry, Waxahachie, has been appointed health officer of Ellis, vice Dr Charles W Simpson, resigned——Dr Isaac F Johnson, Gatesville, has been appointed physician at the State Reformatory——Dr J W McLaughlin, Jr, Austin, has been appointed attending physician at the State Institute for the Blind in that city, vice Dr S E Hudson——Drs John B Burford, Rosebud, and Judson M Andrews, Wharton are making a tour of inspection of the fruit ports in Central America

Epidemic Diseases—Scarlet fever is reported to be epidemic at Georgetown and Justin——Diphtheria is said to be epidemic at Justin——Influenza is said to be epidemic at Calvert, San Angelo, Waco, Fort Worth and in fact all over eastern Texas——Measles is reported to be epidemic in Waco and Dodge where the public school has been indefinitely suspended——Measles is reported to be epidemic at Justin, Coupland, Denton and Temple——On account of the prevalence of smallpox in Navosota the pupils of the public school were vaccinated and the school closed for thorough fumigation——More than 3 000 vaccinations have been performed in Houston up to March 1——Scarlet fever seems to be most prevalent in the districts between Austin, Dallas and Fort Worth Many of the cases are of a mild type——Houston reports 30 cases at the pest house March 11——From Raines County 102 cases of smallpox were reported

GENERAL

Ray Medical Society—A notice has been received that the Ray Medical Society, which is composed entirely of practitioners of the name of Ray" whose last meeting was held in St Louis in 1904 will hold a reunion this year at either Newark or Los Angeles The date and place of meeting are not yet definitely determined

Urge Check of Leprosy—A strong appeal has been made to the Mexican authorities for measures to prevent the spread of leprosy at Culiacan Many lepers are said to be in that city and the disease is reported steadily to be increasing For some time the Mexican government has talked of establishing a leper colony on the Tres Marias Islands in the Pacific Ocean, but thus far nothing has been done

Saved from Drowning—The American squadron which arrived at Shanghai from Nanking March 18, reports a daring rescue by Ensign John C Fremont Jr While the vessels were anchored at Chin Kiang Dr Paul R Stalnaker of the *West Virginia* fell overboard Ensign Fremont, although encumbered by a heavy overcoat jumped over after the surgeon and saved him from drowning

Government Takes Over Quarantine—Dr Joseph H White United States Public Health and Marine Hospital Service has been appointed quarantine inspector for Louisiana Mississippi and the Central American fruit ports This is the first effect of the assumption of the maritime quarantine by the Federal Government By this enlargement of his scope of action Dr White has been given sanitary jurisdiction over a large part of Central America

National Arbitration and Peace Congress—This congress is to be held in New York April 14 17 to advocate the peaceful settlement of international misunderstandings The President of the American Medical Association was asked to appoint two delegates and he has appointed Dr Abraham Jacobi New York and Dr John H Musser Philadelphia Among those who are to deliver addresses are the following Hon James Bryce Baron d'Estournelle de Constant (France) Baron D'Anethan (Belgium) President Roosevelt Hon Elihu Root Secretary of State Hon Oscar Straus Secretary of Commerce and Labor Gov Charles [illegible] William Jennings Bryan Archbishop [illegible]

Visit of German Ophthalmologist—Prof Carl Hess, the famous ophthalmologist of Würzburg Bavaria, will be a guest of the Section on Ophthalmology of the American Medical Association at the Atlantic City session in June He comes in April at the order of the Kaiser to deliver lectures before the universities of Pennsylvania Chicago and New York He will sail for America April 9 In Philadelphia he will be the guest of Dr Charles H Frazier, dean of the medical school of the university

Health Defense League Incorporates—The Public Health Defense League, which was formed to work against practices and conditions of every kind that are dangerous to the public health and morals and to assist in the enforcement of laws against quackery and charlatanism, and the prevention of adulteration of drugs and food substances, and the sale of narcotics, alcohol and dangerous substances, filed corporation papers with the Secretary of State on March 15 The directors include Austen G Fox, Dr Ernest J Lederele, Rev Thomas R Sheer, Dr Thomas Darlington, New York, Howard J Rogers, Albany, Robert E Belcher, Boston, and Henry W Cottell Philadelphia

Health of Canal Zone—In the report for January of Col William C Gorgas, M.D, U S Army, chief sanitary officer of the Panama Canal Zone, he states that the principal causes of death among the employés were pneumonia, which caused 17 deaths, and malaria, which caused 12 In August last the first named disease caused 55 deaths and malaria 29 Among the 5,000 American employés there were only 5 deaths, equivalent to an annual death rate of 12 per 1,000 No death occurred among the 800 American women and children in the zone During January more than 5,600 people arrived in the Canal Zone, and the working force was increased by nearly 2,000 During August, 1906, 42 out of every thousand men were on the sick list every day In December the death rate dropped to 20 per thousand and in January it was 26 per thousand

Warning Against Forger—The H K. Mulford Company, Philadelphia, has notified us of the attempts made by one Remus J Barrow, M.D, to victimize a number of physicians and manufacturers in Philadelphia. The detective service of the Philadelphia police has sent out a warning, stating the following facts about the man

Age 30 height, 5 ft. 9 in weight, about 190 pounds light eyes very light hair worn closely cropped, except front which is usually worn curly pompadour parted in center regular small even teeth prominent when talking square firm jaws very broad shoulders smooth face. German speaks English with strong German accent also Spanish and French When last seen wore long Surtout overcoat Wears hat very low on head Wears in lapel of coat the button of American Medical Association, I e dark blue enamel with red cross in center gold line and border with initials A. M A He claims to practice medicine and to own a private hospital in León Mexico as well as some mines His method of operation is to leave large orders with wholesale druggists, manufacturers of pharmaceuticals chemicals, surgical and hospital supplies to pay for same with checks or forged bank drafts drawn on Bank of Aguas Calientes Mexico in excess of purchase he has the balance placed to his credit for future purchases but later secures a portion of the overpayment in cash.

CANADA.

Smallpox Epidemic.—Smallpox is epidemic in Charlottetown, P E I All schools, churches and other places of public meeting have been closed

Personal.—Dr H B Cushing, Montreal, is returning home after graduate work in Germany ——Dr S C Corbett, Winnipeg, sailed from Boston March 16 for the Mediterranean —— Dr P H. Bryce, chief medical officer of the department of the interior of Canada, has left Ottawa for the Pacific Coast to arrange for the erection of the new detention hospital in Vancouver

Medical Course Lengthened.—Henceforth any one desiring to obtain the degree of M D, C.M, from McGill University must attend the college five years instead of four The present curriculum will be spread out so that studies will continue uninterruptedly for the five years The bill before the recent session of the Quebec legislature to make a five years course compulsory in the province of Quebec, was thrown out by the legislative council

New Association to be Organized—The superintendents of the various hospitals in Ontario will hold a meeting in Toronto to form the Association of Hospital Superintendents of Ontario Dr R R Ross Buffalo president of the American Hospital Superintendents' Association will give an address Dr Edward Ryan of the Provincial Hospital for the Insane at Kingston will read a paper on the relation of the work of general hospitals to that of hospitals for the insane The Toronto superintendents will entertain the visiting superintendents at luncheon in the parliament buildings, where the meeting is to be held

Hospital News.—It has been decided to demolish the old building of the Montreal General Hospital and to erect a new one at a cost of $500,000 The new hospital will occupy the old site with the addition recently purchased at a cost of $120,000, and the grounds will now occupy an entire square It is the intention of the governors to place the hospital on an equal footing with the best hospitals on this continent ——The Marine Hospital at St Catherines, Ont, has been given for a new hospital, a large modern residence and three acres of land valued at $15,000 The residence will be used for a nurses' home and a new hospital will be built at once ——A movement to establish a Jewish hospital in Montreal is progressing favorably It will be known as the Mount Sinai Hospital ——The special committee of the Toronto General Hospital has returned from visiting various hospitals in the United States and reports that while it costs $1 33 to treat each patient per day in the Toronto General Hospital it costs from $1 97 to $2 50 in the hospitals visited in New York Philadelphia and Baltimore

FOREIGN

Physicians in Legislative Assemblies—We learn that the new Russian douma contains 28 members who are physicians, while the newly elected German reichstag has 7 medical members

Antituberculosis Congress in Portugal—The fourth annual meeting of the forces organized in Portugal to combat tuberculosis will be held at Oporto April 4 to 9 An exhibition along the line of the tuberculosis exhibitions in this country will accompany the congress and be continued for some time afterward

Plague in China—The United States deputy consul general at Newchwang reports that an epidemic of plague has again broken out in that city and that the disease seems to be in the most malignant form, death occurring within a few hours The first symptoms are headache and fainting spells, which are followed in a few hours by bloody foam running from the mouth Steps have been taken to prevent the spread of the disease

Sale of Stamps to Raise Funds for Crusade Against Tuberculosis—In Holland some new stamps have been placed on sale which cost one-half more than other stamps of the same denominations The extra amount thus paid in is to be set aside by the government to be used exclusively for the crusade against tuberculosis, erection of sanatoria, fresh air colonies, etc It is said that the public is cooperating well in purchasing these special stamps

Plans for Public Baths in Villages—A German society was organized some time ago to promote the movement for public baths in every community It offered prizes for the best work suggesting plans for securing bathing facilities in country villages throughout the entire year The seven best works out of the number received have been published with further suggestions from the officers of the society, and the whole question seems to have reached a practical solution in these plans The *Allg med Ct Ztg* remarks that they represent a notable advance in the progress of civilization The pamphlet can be obtained from the central office of the society, Berlin NW 6, Karlstrasse 19

Medical Women in France and Germany—Since 1899 women have been admitted to the German universities, but only in a few of the states do they have all the privileges of the men students They now form 4 per cent of the total number of medical students in Germany, that is 300 out of the total of 7 219 medical students In France 454 women are studying medicine A large proportion of the women medical students in both France and Germany are foreigners, but there are now 50 duly registered medical women practicing in Germany and 27 in Hungary An editorial in the *Deutsche med Wochschr* No 7, states that the opposition to the admission of women to the medical profession is gradually dying out, but that it behooves all who have the responsibility for the career of a young woman—parents, guardians and family physician—to deliberate well before deciding that the young woman in question is physically and intellectually equal to the severe demands of the long years in the university and professional school and later for the struggle of establishing herself in professional life

Society for Sanitary and Moral Prophylaxis in the Argentine Republic—A society with this name has recently been organized with headquarters at Buenos Ayres It is modeled on

the pioneer French society, organized mainly by Fournier's efforts Fournier's pamphlet, "For Our Sons When They Get to be Eighteen," has been translated into Spanish and is to be distributed in large numbers to university students, factory employés and other young men The society also is at work to organize day and evening dispensaries for free treatment of venereal diseases, in connection with each hospital The society further, wishing to reduce the stigma associated with venereal disease in the lay mind, proposes to introduce a new term for it, similar to what has been done in France, where syphilis is now currently called "avariosis," and gonorrhea 'neisserosis," and both are grouped as "avarie" The Argentine society suggests the term "avena" to designate the consequences of the venereal peril E R Coni is the president of the new society and C Lloveras, vice president, with J A Muñiz as secretary—all names well known in international hygiene and sanitation An antituberculosis society was organized in Argentina six years ago, and some of its achievements have been chronicled in these columns, among others the printing of advice in regard to tuberculosis on the boxes in which matches are sold at retail

Report of the Medical School Inspectors of Berlin for 1905 6—The *Deutsche med Wochschr* for February 21 comments on this recently published report that it shows that parents are taking more and more interest in the medical inspection of their children and are paying more heed to the advice on hygiene given at the same time No attempt is made to examine repeatedly all the children, but only those who are suggested for the purpose by the school authorities From 10 to 20 per cent of the children come to school without a warm breakfast The school inspectors remark that poverty was only exceptionally the cause of this, but generally neglect or temper The fact that it is principally on Mondays that the children come breakfastless to school is significant In from 6 to 40 per cent the children do not have a separate bed, and in 6 per cent more than 2 persons sleep in the bed In some of the schools half the children had no tooth brush Tickets were given to a hundred children with defective teeth, entitling them to free dentistry, but only 2 children applied About 3 per cent of all the children were found by the inspectors to be scrofulous, weakly, rachitic or tuberculous Here, again, the inspectors say that ignorance and lack of conscientiousness are responsible for the poor health of the children rather than poverty They advise provision for house-to-house inspection and education in hygiene to combat these conditions and the prevalence of vermin

Death of Noted French Chemist, Henri Moissan.—Not long after his return from Stockholm, where he had been the recipient of the last Nobel prize for chemistry, Henri Moissan died February 21, aged 54 His fame began with research on biologic chemistry, and his isolation of fluorine and discovery of some of its combinations a few of which are being used in therapeutics He then perfected an electric furnace with which he produced temperatures of 3,500 C, and was able to distil gold, copper, iron nickel, uranium and other metals and to make microscopic diamonds This furnace is merely a block of lime containing in a central cavity the electrodes from a powerful dynamo and the objects to be heated The mass of the sun is known to be composed of the metals which he was able to distil at this temperature, and he consequently believed that the surface of the sun must be at a lower temperature than that which he was able to induce in his furnace Incidentally he noticed one day the formation in his furnace of a gravish substance which he recognized as calcium carbid and found that it produced a gas on contact with water and this was the origin of the acetylene gas industry He theorized that diamonds were the result of vaporization of carbon under immense pressure and he realized these conditions by mixing carbon with iron, heating to 3 000 C and then plunging the mass into ice water The outer layer hardened while the inside was still molten and as the metal within dilated as it cooled the vaporized carbon inside was subjected to immense pressure with the result that microscopic diamonds were found when the block was opened Moissan was professor of pharmacy at Paris and titular member of the French *Academie de Medecine*, while he was honorary member of numerous scientific societies in this country and abroad The fatal weakness of the heart complicating appendicitis is ascribed by his friends to inhalation of gases in working with his furnace

Danish Law Aiming at Repression of Venereal Disease.—The full text of the law of March 6, 1906 which went into effect in Denmark last September is published in the *Deutsche med Wochschr*, No 8, on one of the advertising pages It abolishes all reglementation of prostitutes, and applies to them the regulations in vogue against vagabondage in general It is prohibited to maintain a brothel or to rent rooms to prostitutes under 18 or for assignation purposes under penalty of imprisonment with a penitentiary term of two years in case of repetition of the offense Strict penalties and liability for damages are also imposed for transmission of venereal disease when the other party is not aware of the danger of contagion Physicians are required to make weekly reports of the number of patients with venereal disease in their care, and are enjoined to warn such patients of the dangers of transmission of the disease Circulars for this purpose are supplied by the authorities Provision is made for gratuitous treatment of venereal disease for every one, whether able to pay for it or not and the provision is also made that a patient of this category being treated in a hospital, must not leave the institution until he is dismissed by the physician Disregard of this regulation carries a penalty of from 20 to 30 days' imprisonment The police are empowered to forbid the proprietors of hotels restaurants and saloons from employing women who have been previously sentenced on any of the above counts It is further forbidden to give a syphilitic infant to another woman to nurse and for a syphilitic wet nurse to take a healthy child to nurse A child is regarded as suspicious of syphilis even when presenting no signs of the disease, if either father or mother had contracted syphilis less than seven years before its birth and when less than three months have elapsed since its birth Arrangement is made for payment by the state or municipality of the physicians who make the examinations and treat the patients, either *per capita* or by an annual stipend, and these physicians are not allowed to ask or take any fee from the patients

LONDON LETTER.

(From Our Regular Correspondent)

LONDON, March 12, 1907

Quack Remedies in Great Britain

There is no doubt that the British public is greatly addicted to the proprietary and "patent medicine" habit and is peculiarly susceptible to the wiles of the medical quack Such people flourish to an extraordinary degree in Great Britain at present, and their number is a remarkable tribute to the gullibility of the British public as well as an example of the manner in which proprietors of newspapers and magazines, for the sake of gain, will aid them in their predatory methods A weekly paper named *Truth* is published in London, and one of its objects for many years has been exposure of frauds and swindles of every description Medical quacks have fallen under the lash of the editors of this paper, which publishes at the end of each year what it terms a "cautionary list" containing the names and description of all the fakes which have come under its notice during the year Of late this list has been of much interest to American readers Since the operation of the law in the United States which forbids the use of the mail for carrying on a quack business in that country, a large number of quacks have flocked to Great Britain, where they can carry on their nefarious operations with impunity Below will be found some of the names of Americans in Great Britain copied from *Truth's* "cautionary list"

American College of Sciences Rochester New York This institution sells a worthless course of instruction in personal magnetism and hypnotism and together with the Nahe School and K Leo Minges mentioned below is the enterprise of one I D Shoemaker jeweler of 59 Page Street Providence R I

K Leo Minges Rochester N Y and 7 Avenue de l'opera Paris Proprietor of a cartilage treatment which is guaranteed to add two or three inches to the height It is undiluted humbug

Liquozone A nostrum widely advertised by a firm of American quacks calling themselves the British Liquozone Company as a cure for all germ diseases It is nothing more than a weak solution of sulphurous acid a drug which is likely to prove dangerous if administered by inexperienced hands At an inquest in June 1 90 on two children who died after taking the stuff the jury returned a verdict that they died from exhaustion after vomiting and diarrhea set up by taking liquozone It may also be stated that on several occasions the *Lancet* called attention to the worthless and dangerous properties of liquozone as a remedy

Nutriola Company Chicago and 9 17 Oxford St London Ltd The enterprise of an American named Hanson the principal of the company Not content with advertising its ability to cure everything the company has also advertised purchase of its hair as the shortest way to wealth A fraud order has been entered against the company by the United States Post office

Vinyl Company British Regent Street W A quack establishment of American origin dealing in remedies for female ailments Women employes go about the country pretending to possess medical knowledge delivering health lectures which they have mostly learned by heart and persuading deluded women that they are in serious danger unless they take the vinyl remedies and let themselves to the treatment of the vinyl agent

The five concerns in the following list have been officially declared to be carrying on a fraudulent business in the United States, and a "fraud order" has been entered against them

Dr Knapp Medical Company, Detroit Fallopa Lynn Company, St Louis Institute of Physicians and Surgeons Rochester N Y Professor R E Dutton Lincoln Neb Professor Thomas F Adkin Rochester N Y

The above-mentioned are by no means all that are black listed by *Truth* but a sufficient number have been cited to demonstrate the fact that American quacks like the wicked, flourish as the green bay tree in Great Britain

Metric System for Great Britain.

A bill is to be brought into the British Parliament proposing that from April 1, 1910, all the present weights and measures used in Great Britain shall be replaced by those of the metric system This bill will insure easy education in the new system by ordering local authorities to provide local standards at least twelve months before the act comes into operation

National Physique and Anthropometry

The government has been urged to establish a national anthropometric survey on the lines recommended by the interdepartmental Committee on Physical Deterioration in July, 1904 The machinery for such survey is ready, but a grant of from $20,000 to $25,000 from the government is necessary in order to put it into efficient action The object is to get a continuous record of exact measurements of the physical and mental characters of the population and to note the environment in which the subjects of the measurements live It is proposed to form a central department consisting of a director, two assistant directors, six surveyors and measures, and six statistical clerks The surveyors would be sent to take measurements in about 100 different districts of the country, and would measure in each about 2,000 adults and 4 000 school children A recent survey carried out in Scotland showed that in Glasgow hair and eye colors have changed so radically that the population of the town could no longer be considered to belong to the same race as the normal population of Scotland The change is supposed to be due to the industrial environment in which Glasgow people live, which, to a large extent, has eliminated certain types of the population and completely changed its composition Anthropometry has proved conclusively that in industrial environment people with fair hair and blue eyes—the Saxon type—die out and disappear, as they more easily fall victims to the diseases common in industrial areas and slums than do dark people In rural districts, on the other hand, the fair man should be superior to the dark The prime minister, Sir H Campbell Bannermann, promised that the request would receive the careful consideration of the government

The Care of Children.

A sensation has been created by a series of articles contributed to the *Tribune*, the leading liberal paper, by Mr G R Sims, the well known writer on the manner in which children are reared in the slums of London Mr Sims found that the saloons are invaded by women who bring babies and small children into the heated and poisonous atmosphere The mothers not only drink cheap alcohol, vitiating their powers of suckling but actually dose new born infants and tiny children with gin and other alcoholic liquors, in order "to keep them quiet" As a result the *Tribune* arranged a conference at its office, which was attended by leading authorities on children's diseases, philanthropists, bishops, Salvation Army officers health officers and others The government was represented by Dr Macnamara, parliamentary secretary to the local government board There was a general consensus of opinion that Mr Sims pictures were not in the least overdrawn The following resolutions were carried 1 No child under the age of 14 shall be allowed to enter any licensed house other than a residential hotel, 2, definite teaching in temperance should form part of the curriculum of public elementary schools, 3 that the conference resolve itself into a committee for supporting the previous resolutions as legislative measures

VIENNA LETTER

VIENNA, March 10 1907

Protection of Infant Life

(From Our Regular Correspondent)

A movement has been set on foot to amend the present regulations with regard to the care of destitute or neglected children and a committee including representatives of the local boards of the boards of education and of several philanthropic organizations has been asked by the government to draw up a bill to be presented to the new house of commons in May The main object of the movement is to obtain legal control over persons keeping "baby farms," and to enable the local boards to remove infants kept by persons who are either unfit or incapable of taking care of babies, or from tenements which are unfit or unhealthy or otherwise unsuitable for living purposes In addition, it is proposed to secure better protection for nursing mothers, especially under the form of continued sick pay, and the right to ask for a full month's pay in the case of a working woman giving birth to a living child Legislation is at last compelled to take care of the youngest citizens, as the official statistics prove that the yearly loss of life due to neglect of infants amounts to about 50,000 for Austria alone On the other hand, it has been shown what good results can be obtained by proper care, chiefly by education of the mother as to the rational feeding and by distribution of good milk for infants

Prevalence of Influenza in Austria

The unstable weather conditions throughout the central parts of Europe have had a very deleterious effect on the general health of the population, and influenza bacilli are often present in catarrhal affections of the upper air passages A special feature of this year's epidemic, for so it must be termed, are the complications Inflammation of the frontal sinus is present in nearly 35 per cent of all cases, and acute otitis, mostly of the hemorrhagic type, has been reported to be very frequent, although the percentage of its occurrence could not be ascertained A curious fact, not noticed or reported hitherto, is the liability of certain patients to be affected several times by influenza during the same epidemic, and each subsequent attack proves to be stronger than the preceding one Perhaps the virus becomes more active by "passage" In such cases endocarditis and pleuritic effusions were noticed to be the rule at the third attack The track of the disease is shown on the map to be exactly in accordance with the main directions of the cyclonic and barometric traces

An Outbreak of Anthrax.

An outbreak of anthrax occurred quite recently in one of the hair factories here, and of the 6 cases affected, 4 proved rapidly fatal Investigation showed that all 6 patients had been working in the same room, and the material used by them could be traced to a Russian bale of goods Immediately work was suspended in the factory, and very exhaustive measures were adopted to have the premises and the goods disinfected thoroughly At the same time the inspectors of the slaughtering houses were advised to keep up very strict supervision of their respective districts, with the result that a case of anthrax was found in a group of 27 cattle The necessary measures were thereon instituted and the careass of the animal burnt As regards the treatment of the affected factory hands (4 male, 2 female), the first 4 patients were beyond any hope of recovery when brought to the hospital The disease had not been recognized by the medical man in attendance, the other 2 patients were treated in time by excision simply and they recovered The necessity of international notification of similar outbreaks has now been proved *ad oculos* In quiet times this would hardly have occurred but the civil disturbances in Russia have brought it about that infectious material is exported

Liquid Air as a Sensitizer for Finsen Phototherapy

Privat Docent L Freund reported to the Medical Society of Vienna on his experiments with liquid air which was used by him to shorten the time of exposure in Finsen phototherapy He has found that the intense cold produced by the vaporization of liquid air is not only a powerful anesthetic for local purposes producing profound anemia with subsequent hyperemia but that it renders the tissues of the body exceptionally sensitive to the chemical effects of the electric light The vicinity of the area to be treated is covered by a piece of wood in which a hole has been bored corresponding to the diseased area The liquid air is poured into this hole and the Finsen lamp is turned on for six minutes while the intense anemia lasts Then the process is repeated, so that anemia is rapidly alternating with hyperemia, and the result thus obtained is much more satisfactory than by the usual method As the tissues are sensitized the action of the Finsen light is materially enhanced and the same or better results can be obtained with the shorter exposures He is now experimenting with liquid air as a sensitizer for the Roentgen rays He announced that it is possible to induce at will with the liquid air erythema excoriations and even ulcerations according to the length of the contact, but that they all heal smoothly

Pharmacology

LABORDINE

A Report by the Council and Some Pertinent Comments Added Thereto

The following report was submitted to the Council on Pharmacy and Chemistry by the subcommittee which examined Labordine

To the Council on Pharmacy and Chemistry —Your subcommittee presents the following report on Labordine, sold by the Labordine Pharmacal Co, St Louis

Labordine is advertised to physicians as having the following composition

	Per cent
Apium Graveolens (true active principle) Process Laborde	35⅝
Gaultheria Fragrantissima (true active principle) Process Laborde	25⅛
Acete Amide-Phenyle	15¼
Quinina	1⅛
Benzoyl Sulphyonic Imide	23¼

It is stated to be a "vegetable antipyretic," that it "reduces temperature without heart depression" and physicians are warned to "avoid acetanilid poisoning and danger from other coal tar antipyretics"

While the "formula" and the statement just quoted are sufficient evidence of the fraudulent character of the product yet an abstract of the reports of the chemists who analyzed it is given to further demonstrate its character

Taking the average of the reports of analyses, Labordine contains

	Per cent
Acetanilid	37 9
Free salicylic acid	6 9
Quinin	present
Saccharin	*not found*
Corn starch	present
Milk sugar	34 7

The report of analysis only makes apparent that Labordine is not what it is claimed to be While it is claimed to contain 23¼ per cent saccharin, this substance was not present, or mere traces only While in a disguised way, it is stated to contain 15 1/8 per cent. acetanilid, it contained nearly 40 per cent

It is recommended that Labordine be not approved and that this report be published

The recommendation of the subcommittee was adopted by the Council, and in accordance therewith the above report is published W A Puckner, Secretary

COMMENTS

A concrete illustration of some general principles previously laid down is furnished by a nostrum too unimportant to be of any value save to "point a moral and adorn a tale."

About thirteen years ago Labordine was advertised under the name of Analgine Labordine, "A purely vegetable product,' "a combination of the active principles of *Camellia Thea Apium Graveolens,* saccharin and carbohydrates," "Superior to Antipyrine, Phenacetine, Antifebrine, Acetanilid"—note the use of two names for the same thing—"or any of their imitations,' and "unexcelled by any coal tar product or their compounds" In 1894 the name was changed to Labordine, in order as its owner stated to prevent it being mistaken for a coal tar product of similar name

What its composition was at this time we do not know since there is no guarantee of the permanence nor stability of nostrum formulas except "the honor and reputation of the manufacturers," which as investigation has shown is not always unimpeachable There has been nothing to prevent alteration of the formula if the proprietors desired with every change of the moon But the name and the general tone of the advertising has been the same The claim of superiority over coal tar products has been constantly made

As to the present conditions a circular enclosed with a sample of Labordine recently sent from the St Louis office contains the formula given in the above report of the Council In the same circular are also found these illuminating statements "The medical profession has long appreciated the dangers involved in the administration of various mineral remedies now so commonly employed and the value of a safe effective and reliable vegetable antipyretic is universally recognized Such a remedy is Labordine It is purely vegetable in its composition and produces none of the evil after-effects of the coal tar derivatives Labordine is a purely vegetable cardiac stimulant There is nothing mysterious about Labordine or its constituents The 'Process Laborde' gives the true active principles of the Celery and Indian Wintergreen, something heretofore difficult to obtain To this is added the fact that absolutely chemically pure Acet Amide Phenyle is used The latter is the most valuable and, in fact, the only vegetable antipyretic known'

The above report of the Council shows the following facts

1 *Apium Graveolens* (true active principle), "Process Laborde" is probably powdered celery seed One chemist says 'The powder has the characteristic odor of celery, while a microscopic examination shows the presence of a substance having the characteristic structure of seeds in general ' If celery seed has any "active principle" it has never been isolated As to its therapeutic value, nothing whatever is known It is, we understand, highly beneficial in the case of singing canaries but authorities in scientific therapeutics have never discovered that it possessed any remarkable medicinal qualities

2 *Gaultheria Fragrantissima* (true active principle), "Process Laborde," is probably ordinary every day salicylic acid One analysis showed salicylic acid to be present to the amount of about 7 per cent The question of whether or not salicylic acid could in any way be considered the "true active principle" of *Gaultheria Fragrantissima* was submitted to Prof John Uri Lloyd of Cincinnati the eminent authority on the chemistry of the proximate principles of plants, who replies

> The advertisement is evidently so worded that although the name of the Indian plant *Gaultheria Fragrantissima* is employed its true and active principle being wintergreen oil the concocter can mystify his patrons and at the same time use the well known wintergreen oil made in America, which in my opinion so far as any chemical test might be concerned could not be distinguished from the methyl salicylic acid (wintergreen oil) derived from the Indian plant Concerning whether salicylic acid is a proximate constituent of *Gaultheria Fragrantissima* in my opinion it would be a misnomer to make such an announcement Salicylic acid *per se* does not exist in my opinion in the plants mentioned being made by chemistry

3 The third and most important ingredient in this "purely vegetable antipyretic" is brazenly announced as 'Acete Amide Phenyle," but it is only necessary to say that this imposing designation is an attempt to "Frenchify" a scientific name for acetanilid

Analysis shows that this coal tar product is present to the amount of 37 9 per cent or 1 89 grs in a 5 grain tablet[1] In other words, this imposing Labordine made by a mysterious and elsewhere unheard of "Process Laborde' is simply one more of the herd of acetanilid powders that have been foisted on our profession and that have filled our journals for years past The only thing in it that is of practical therapeutic value is 2 grains of acetanilid to a 5 grain tablet The statement that Labordine is a purely vegetable preparation is probably intended by the proprietors as a good joke on the medical profession Acetanilid is not usually regarded as a vegetable product at least it is not ordinarily found in market gardens The only vegetable source from which acetanilid can be obtained is the beautiful flowering coal tar bush from which so many other nostrum vendors obtain their "perfectly harmless purely vegetable antipyretics' all composed of acetanilid and something to hide it" If the statements made by one of the company's employés and quoted below are true Labordine is not manufactured and made chemically pure in the laboratories of the Labordine Pharmacal Company," and this company has no laboratory as its product is manufactured for it

4 Our readers will be interested to know that the important ingredient entered under the imposing name of Benzoyl Sulphyonic Imide is simply a highly scientific name for saccharin Even on this point however the formula is misleading since it claims 23¼ per cent of this substance whereas the analysis shows that the presence of saccharin could not be proved If it is present at all it is in quantities much less than stated and so small as to be difficult of recognition Instead it appears that the product contains common starch and about 35 per cent of milk sugar

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1 Since this article was prepared we find that the [illegible] Food and Drugs Act has forced the proprietors [illegible] on the label the amount of acetanilid it contains [illegible] per cent or [illegible] grains in a [illegible] grain tablet

THE COMPANY ITSELF

One of the humiliating phases of the proprietary medicine business is that, in many instances, these preparations are foisted on our profession by men who, knowing nothing of medicine, pharmacy or chemistry, and who not only presume to concoct our medicines, but also assume to instruct us how to use them

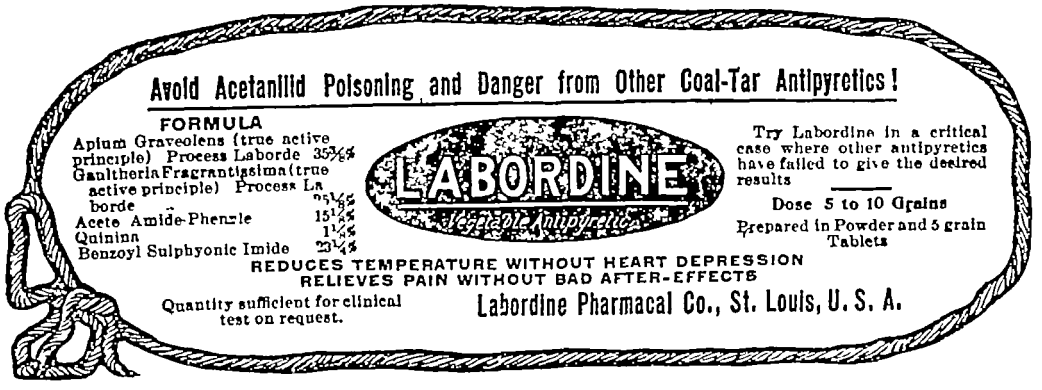
Gould s Commercial Register for 1907 gives the officers of the Labordine Pharmacal Company as H M Coudrey, president, M Crawley, vice president, and D E Gamble, Jr, secretary and treasurer The place of business is given as 420 Market Street, St Louis We are informed that Harry M Coudrey is an insurance agent and the present member of Congress from the Twelfth Missouri District, that Mark Crawley is a clerk in the insurance office of H M Coudrey, and that Mr Gamble is cashier in the same office A recent visit of a representative of THE JOURNAL to 420 Market Street, St Louis, showed that the office of the Labordine Pharmacal Company is in Room 12 on the third floor of an old dilapidated building There was no sign on the door of the office, but on the wall next to an old elevator was a very small sign which read "Labordine Chemical Company, Room 12" The office at the time of the visit was apparently in charge of a young woman about 20 years old Careful scrutiny of the furniture and fixtures showed that the room contained an old oak roll top desk in one corner and a kitchen table, on which were piled about half a dozen packages of Labordine The floor of the room was bare and very dirty In an adjoining room, the door of which was open, was piled a lot of broken furniture No laboratories nor chemical apparatus were visible The young woman in charge stated that Labordine was made by the Mallinckrodt Chemical Works, at No 3600 North Second Street, St Louis

This is a fair sample of the nostrums and of the methods of exploiting them The bitterly humiliating fact about the whole business is that a preparation, advertised under such palpably misleading claims could actually be advertised in medical journals even in journals of a supposedly high scientific standard, and could be bought and prescribed for years by supposedly intelligent and conscientious physicians It is not supposed that every physician should be enough of a chemist to detect the ridiculous discrepancies between the published formula and the therapeutic claims made for such mixtures But that members of a supposedly learned profession should fail to have enough interest in the preparations they prescribe for their confiding patients to find out that acetanilid is being masked under an obsolete and little used name that only saccharin is hidden under an imposing polysyllabic designation that the so called 'active principle Process Laborde (whatever that may be) is only equivalent to 1/3 grain of salicylic acid in a 5 grain tablet, and that the advertising matter sent out for years by this company contained absolute falsehoods regarding the composition and therapeutic benefits of its preparation is certainly just cause for shame and humiliation If a physician, knowing the composition of Labordine, wishes to prescribe it and prescribes it intelligently, he has a perfect right to do so If he wishes his patient to have 2 grains of acetanilid, 1/20 of a grain of quinin, and 1/3 of a grain of salicylic acid, and considers a mixture of ground celery seed, starch and milk sugar as a proper vehicle for this medication, no one will question his right to administer it No physician, however, has any right, either moral or professional to prescribe a preparation, concerning the ingredients of which he knows absolutely nothing

Is it possible that such carelessness may be one of the causes of waning public confidence in our profession? We leave it to our readers to determine whether such a moral can be drawn from this typical nostrum story

Patented Remedies and Their Substitutes

The *Pharmazeutische Zeitung*, Oct 13, 1906, discusses the objections made by the Swiss Apothecary Association to the patenting of medicinal preparations which it considers of importance as affecting not only Switzerland and the chemical industry in that country, but the manufacture of medicinal chemicals in other countries as well The objections made are chiefly two The enhanced price which accompanies patented articles and the difficulty of control of their identity and purity and of comparison with their unpatented substitutes



This advertisement is reproduced from the *Therapeutic Gazette* of November For brazen effrontery and shameless mendacity the caution AVOID ACETANILID POISONING AND DANGER FROM OTHER COAL TAR ANTIPYRETICS is hard to beat, when the stuff contains nearly 40 per cent of acetanilid And yet this is but a fair sample of nostrum advertising that intelligent physicians tolerate in medical journals they help to support For how much longer ? ? ?

The pharmacopeias have done little to provide reliable and standard methods of testing these preparations Only three patented or trademarked preparations have been received into the new edition of the German pharmacopeia and the supplement gives the pharmacist little help in his endeavor to test these preparations for himself On the other hand, the Swiss pharmacopeia commission has gone to the extent of preparing tests for a large number of remedies protected by patent or trademark by which they may be compared with their substitutes which are found in the market Dr J Thomann has made comparative tests of a number of these preparations using the commission s methods, and finds that in a considerable number of cases the substitute found in the market equals or excels in purity the original patented preparation The comparison of tannigen and diacetylated tannin revealed differences in the melting point (which is not constant), in other respects the substitute appeared to be fully equal to the original The same was true of thiocol and potassium ortho guaiacol sulphonate and of salophen and its substitute acetamido salol In regard to protargol a marked difference was found between different samples of silver protein offered as substitute Two samples showed substantially the same proportion of silver as protargol (8 per cent), while others fell as low as from 3 8 to 4 per cent In one substitute for xeroform tribromphenol was detected

The testing of tannalbin by digestion with pepsin showed that the kind of pepsin used made an essential difference in the result indicating the necessity of careful specification of the

processes prescribed for these tests Thomann suggests a standing committee whose function shall be to devise and publish methods for testing new preparations during the intervals of the editions of the pharmacopeia

Another Death from Mrs Winslow's Soothing Syrup

Dr John M Edwards, Commissioner of Health, Mankato Minn, reports the death of Mary Veigel, aged 18 months, from an overdose of Mrs Winslow's soothing syrup He writes

'The undertaker came to my office for a burial permit for a child who had died, the parents said, of measles The undertaker called my attention to the fact that the parents made a request for a burial permit worded that way The coroner was called and asked me to assist him in making an investigation The child had been the youngest of a family of five, all of whom had measles The child had been doing very well, so its mother said until twelve hours before its death, when it became peevish and cross At 8 a m she gave the child the first dose of Mrs Winslow's Soothing Syrup The child being fussy and fretful, the mother continued to give her this medicine until she had taken about half the contents of the bottle About 2 or 3 o'clock in the afternoon the child died I put down the chief cause of death as poisoning from Mrs Winslow's Soothing Syrup and the contributing cause as measles As the child had been sick, her system was more or less undermined, and she fell an easy prey to the medicine

"I submitted the remaining part of the bottle which I took from the house to the laboratory of the State Board of Health, at St Paul, and I have on file in my office the analysis of the contents in which the chemist found morphin."

Support the Association.

Under this head the *California State Journal of Medicine* makes the following appreciated comment "Doubtless but few realize as yet the tremendously valuable work which is being done for the medical profession of this country by the American Medical Association, through its Council on Pharmacy and Chemistry The work of the Council is entirely a labor of love. The Councilors receive no compensation, we believe, for the work which they are doing for us, and the actual expenses of doing the work, which are borne by the Association must be very great Shall all this work and this expense be thrown away? That is a question which the medical profession of the country must decide, it is up to you, individually, as much as to anyone else Will you follow the work of the Council, recognize the frauds it discloses and bear them in mind, will you refuse to use or recommend any of the extra pharmacopeial preparations presented to you, unless they have passed the close scrutiny of the Council and received its approval? That it would seem, is about the least that you, as a self respecting physician, can do in justice to yourself and your patient Any remedial preparation that you do not find in the list of 'New and Non Official Remedies,' as issued by the Council, is one to look on with suspicion, it may be a good and legitimate product, but the chances are that it is not, or that the proprietors have uttered exaggerated statements as to its value The *Journal* will print, every month, a list of all preparations approved by the Council Look for it, study it, keep it handy for reference"

An Eclectic's Attitude Toward Proprietaries—Dr C F Frazier Weatherford Texas writing in the *Eclectic Medical Journal* March 1907 has this to say about proprietaries

"Every mail brings samples samples samples and advertising literature until you can not rest and I have often thought 'What does all this mean?' 'From where does all the money come to keep up all this large amount of expensive advertising?' 'Are the physicians over the country patronizing them?' And I have been sad in my soul to admit that they were and as I have watched this process evolve and develop my sadness has turned to disgust and disgust to vexation as I have seen my fellow practitioner (to use a common term) 'worked' To illustrate Marchand's peroxid of hydrogen was at first advertised and sampled only to physicians then when the manufacturers got a few indorsements from prominent physicians (that seemed all they wanted) they then threw their preparation wide open to the public the lay press is full of advertisements of Marchand's peroxid everybody knows all about peroxid of hydrogen and this same thing is true, *in a measure*, of antikamnia, glycothymoline, listerine, antiphlogistine, and many others Some of them have not come out quite so strong as Marchand but their product is not quite so well known to the public and I am convinced that all they are waiting for is a little more (ethical) advertising, and then they will all come out'

Importation of French Proprietaries into Russia.

According to *Progrès Medical*, Feb 23 1907, an arrangement has been entered into by which the Russian government will accept the reports of analyses of French proprietaries made by certain laboratories which are to be designated by the French government The laboratories act in this case without any official character and they are not called on to give an opinion as to the quality of the medicines but simply to state the *composition* The analyses made are for the purpose of satisfying the requirements of the Russian administration and can not be invoked in France in opposition to legislation applicable to the case

A Sensible View of Medical Etiquette—Medical ethics according to the London *Spectator*, instead of being kept up as people so often imagine in the interests of physicians, are really maintained in the interests of the public It is the public not the doctors, who would suffer most, were medical ethics entirely done away

Medical Education and State Boards of Registration

COMING EXAMINATIONS

UTAH State Board of Medical Examiners Salt Lake City April 1 Secretary Dr R W Fisher Salt Lake City

ARIZONA Board of Medical Examiners Phoenix April 1 2 Secretary Dr Ancil Martin Phoenix

COLORADO State Board of Medical Examiners Denver April 2 Secretary Dr S D Van Meter 1723 Tremont St Denver

IDAHO State Board of Medical Examiners Boise April 2 Secretary Dr T L Conant Jr Genesee

MINNESOTA State Board of Medical Examiners the Old Capitol St Paul April 2 Secretary Dr W S Fullerton St Paul

MONTANA State Board of Medical Examiners the Capitol Helena April 2 Secretary Dr W C Riddell Helena

GEORGIA Eclectic Board of Medical Examiners Senate Chamber State Capitol Atlanta first week in April Secretary Dr L I Bugg Madison

GEORGIA Regular Board of Medical Examiners Capitol Building Atlanta April 30 May 1 Secretary Dr I R Anthony Griffin

NORTH DAKOTA State Board of Medical Examiners Grand Forks April 2-4 Secretary Dr H M Wheeler Grand Forks

RHODE ISLAND State Board of Health State House Providence April 4 Secretary Dr Gardner T Swarts Providence

ARKANSAS State Medical Board Little Rock April 9 Secretary Dr F T Murphy Brinkley

ARKANSAS Homeopathic Medical Board Little Rock April 9 Secretary Dr V H Hallman Hot Springs

WEST VIRGINIA State Board of Health Wheeling April 9 11 Secretary Dr H A Barbee Point Pleasant

DISTRICT OF COLUMBIA Board of Supervisors in Medicine Washington April 12 Secretary Dr Geo C Ober Washington

CALIFORNIA State Board of Medical Examiners San Francisco April 16 Secretary Dr Chas I Tisdale San Francisco Cal

MISSOURI State Board of Health St Louis and Kansas City April 16 18 Secretary Dr J A B Adcock Warrensburg

ILLINOIS State Board of Health Great Northern Hotel Chicago April 17 19 Secretary Dr J A Egan Springfield

KENTUCKY State Board of Health City Hall Louisville April 23 Secretary Dr J N McCormack Bowling Green

TEXAS State Board of Medical Examiners Austin April 30 May 2 Secretary Dr T T Jackson San Antonio

TEXAS Eclectic Medical Board Dallas about April 25 Secretary Dr J S Downs Galveston

Reciprocity Convention—The American Conference of Reciprocating Examining and Licensing Medical Boards will hold its next annual session in Chicago Tuesday April 30 1907

Arkansas October (1905) Report—From correspondence with Dr F T Murphy secretary of the State Medical Board of the Arkansas Medical Society we learn that the failure charged against the Southwestern University Medical College Dallas Texas in the report published in THE JOURNAL Jan

5, 1907, page 75, was made by an undergraduate and, therefore, the college is not to be held responsible.

Drake University Adopts Higher Entrance Requirements.—By a resolution adopted by the faculty, March 11, 1907, the Medical Department of Drake University at Des Moines, Iowa, commencing with the college year 1910 will require in addition to a four year high school education two years of work in a college of liberal arts as a prerequisite to the study of medicine. There are now 41 medical schools which by 1910 will require one or more years of work in a college of liberal arts as a prerequisite to medical study.

Establishment of Course in Pharmacy in University of Minnesota.—One reason for the dependence of physicians on proprietary ready made mixtures is because of their lack of familiarity with materia medica and pharmacy. It is conceded by all that this lack of knowledge is because of poor instruction in schools of medicine, along these lines especially as regards courses in pharmacy, including the writing of prescriptions, the proper combination of drugs, their incompatibilities and doses. Instruction in medical schools is insufficient because, as a rule, these courses are given by physicians who are not sufficiently familiar with the subject or else they are given by pharmacists who are not teachers. It is, therefore, gratifying to note that the regents of the University of Minnesota have appointed the dean of the School of Pharmacy to give a course of instruction in the College of Medicine and Surgery. Professor Wulling is well known as a competent pharmacist and as an efficient and enthusiastic instructor. His appointment, therefore, can only be to the best interests of medical education.

Michigan Reciprocity Report.—Dr. B. D. Harison, secretary of the Michigan Board of Registration in Medicine, sends us a list of physicians licensed through reciprocity during the year 1906. The following colleges are represented:

REGISTERED THROUGH RECIPROCITY

College	Year Grad	Reciprocity with
College of P. and S. Chicago (1900) (1901) (1902) (2 1904) (3 1905)	(2 1906)	Illinois
Northwestern University (1900) (2 1902) (2 1906) Illinois (1897) with Wisconsin	(1903)	Iowa
Rush Med. Coll. (1901) (2 1904) (1905) with	(1901)	Illinois
Bennett Coll. of Eel. Med. and Surg.	(1905)	
Hahnemann Med. Coll. Chicago (1901) (4 1906) with Illinois	(1888)	Iowa
Chicago Med. Coll.	(1890)	Illinois
Chicago Homeo. Med. Coll.	(1901)	Ohio
Hering Med. Coll. (1899) with Indiana	(1904)	Kansas
Indiana Med. Coll.	(1906)	Indiana
Ft. Wayne Coll. of Med.	(1905)	Indiana
Drake University Des Moines	(1894)	Iowa
University of Iowa	(1883)	Iowa
Hospital Coll. of Med. Louisville (1889)	(1892)	Missouri
University of Maryland	(1902)	Maryland
Baltimore Med. Coll.	(1905)	Maryland
College of P. and S. Baltimore (1902) (1897 with Iowa (1895) with Ohio	(1891)	Wisconsin
University of Michigan Coll. of Med.	(1890)	Montana
University of Michigan Homeo. Dept.	(1902)	Indiana
Michigan Coll. of Med. and Surg.	(1897)	Wisconsin
St. Louis Coll. of P. and S.	(1891)	Missouri
University of Nebraska	(1904)	Nebraska
College of P. and S. New York	(1899)	New York
Cleveland Homeo. Med. Coll.	(1905)	New York
Jefferson Med. Coll.	(1900)	Ohio
Hahnemann Med. Coll. Philadelphia	(1900)	Maryland
Laval University Montreal Que.	(1894)	Maine
McGill University Montreal Que.	(1875)	Minnesota
Western University London Ont.	(1906)	Wisconsin
Toronto University Ontario	(1904)	Wisconsin
Royal Imperial University Vienna	(1885)	Indiana
University of Maximillian Germany	(1873)	Missouri
Heidelberg University Germany	(1902)	Iowa

Marriages

FREDERICK HOLME WICCIN, M.D., New York City, to Miss Christina Ferguson Orr of Litchfield, Conn., March 14.

HOMER CUTLER CROWELL, M.D., Kansas City, Mo., to Miss Sarah Estelle Bean at New York City, March 16.

ANNA BARTSCH, M.D., Washington, D. C., and HAROLD FREMOND DUNN, M.D., of Ridgway, Pa., March 5.

WILLIAM CARR SHANDON, M.D., Albuquerque, N. M., to Miss Mary E. Smith of Glasgow, Mo., March 7.

WILLIAM FRANCIS MITCHELL, M.D., to Miss Frances Shull, both of Lancaster, Mo., March 12.

WILLIAM M. WALLIS, M.D., St. Joseph, Mo., to Miss Nettie Douglas, at Kansas City, recently.

G. W. WALKER, M.D., Hyattville, Wyo., to Mrs. Blanche M. Bell, at Sheridan, Wyo., recently.

OLIVER W. BOATMAN, M.D., to Miss Elizabeth Mercer, both of Burlington, Iowa, March 12.

Deaths

William J. Wakeman, M.D. U. S. Army, Yale University, Medical Department, New Haven, Conn., 1870, who was appointed assistant surgeon, with the rank of first lieutenant, May 23, 1882, was advanced to the grade of captain five years later and promoted to the grade of major and surgeon, Feb. 21, 1900, who served as major and brigade surgeon of volunteers during the Spanish-American War, and had recently been stationed at Fort Thomas, Ky., died at Fort Monroe, Va., March 20, from obstructive jaundice, aged 52.

Leander P. Jones, M.D. New York Homeopathic Medical College and Hospital, New York City, 1874, of Greenwich, Conn., a member of the American Medical Association, state senator in 1894, warden of the borough, chairman of the school committee and town health officer, who was mainly instrumental in the establishment of the Greenwich General Hospital, for many years fleet surgeon of the Indian Harbor Yacht Club, died at Bellaire, Fla., March 18, from kidney disease, after a long illness, aged 61.

James Utley, M.D. Medical School of Maine at Bowdoin College, Brunswick, 1874, a member of the surgical staff of Newton (Mass.) Hospital for 13 years and one of the best known physicians of eastern Massachusetts, for many years physician at the Middlesex County jail, East Cambridge, died at his home in Newton, March 15, from disease of the stomach, after a prolonged illness, aged 68.

Rodney C. F. Combes, M.D. Bellevue Hospital Medical College, New York City, 1875, a member of the state and county medical societies, the Long Island Medical Society and the Brooklyn Neurological Society, of which he was once president, died at his home in Brooklyn, March 18, from typhoid fever contracted during a recent trip to Mexico, aged 59.

William Henry Donnelly, M.D. Baltimore Medical College, 1905, assistant house physician on the Boston Floating Hospital in 1905, and later house physician at the House of Providence Hospital, Holyoke, Mass., died at the home of his mother in Worcester, Mass., February 9, from brain tumor, after an illness of three weeks, aged 27.

Joseph Hanson Hare, M.D. Medical Department of the University of Nashville (Tenn.) 1889, for many years president of the board of health of Bluefield, W. Va., died from hypostatic pneumonia, February 22, at his home after an illness of about two years with obscure nervous disease, aged 51.

Thomas Benjamin Noble, M.D. Medical College of Ohio, Medical Department of the University of Cincinnati, 1851, one of the oldest and most beloved practitioners of Johnson County, Ind., died at his home in Greenwood, March 8, from arteriosclerosis after an illness of two months, aged 80.

Jennings P. Crawford, M.D. University of Iowa College of Medicine, Iowa City, 1883, a member of the American Medical Association, district surgeon for the Chicago, Milwaukee & St. Paul Railway at Davenport, Iowa, died at his home in that city, March 24, from arteriosclerosis, aged 51.

James B. Murfree, Jr., M.D. Vanderbilt University Medical Department, Nashville, 1893, a member of the American Medical Association, city physician of Murfreesboro, Tenn., and a prominent practitioner of that city, died at his home, March 15, after an illness of two days, aged 37.

Herbert A. Barney, M.D. Long Island College Hospital, Brooklyn, 1898, a member of the American Medical Association, supervisor of the town of Belmont and coroner and jail physician of Allegany County, N. Y., died suddenly at his home, March 16, from quinsy, aged 42.

John B. McDowell, M.D. Medical Department of Kemper College, St. Louis, 1845, Missouri Medical College, St. Louis, 1859, a veteran of the Mexican War, died at his home in Mason City, Ill., March 16, from cerebral hemorrhage, after an illness of one day, aged 89.

Albert M. Warner, M.D. Vermont Medical College, Woodstock, 1842, said to have been the oldest practitioner of Waukesha, Wis., county physician of Waukesha County for several years, died at the home of his adopted daughter in Chicago, March 15, aged 91.

John George Reinberg, M.D. The Netherlands University of Utrecht, Holland, 1871, a member of the American Medical Association, died at his home in McBain, Mich., February 22, from pneumonia complicating typhoid fever, after an illness of two weeks, aged 62.

James M. McClanahan, M.D. Medical College of the State of South Carolina, Charleston, 1868, one of the oldest practitioners of Oconee County, S. C., died March 14, from an accidental fall from the second story of his barn at Petreat, aged 78.

Oscar Robert Bluthardt, M.D. Rush Medical College, Chicago 1886, assistant physician at the Cook County Institutions Dunning, died at his home in Chicago, March 12, from cerebral hemorrhage, after an illness of four weeks, aged 54.

Iral L. Brown, M.D. Central College of Physicians and Surgeons, Indianapolis, 1878, one of the oldest practitioners of Montgomery County, Ind., died at his home in Alamo, March 18, from cerebral hemorrhage, aged 80.

James B. McGrew, M.D. College of Physicians and Surgeons Baltimore, 1883, formerly a practitioner of Pittsburg, Pa., died at the home of his brother in Finleyville, Pa., March 16, after a prolonged illness, aged 52.

Charles Mervin Penn, M.D. University of California, Medical Department, Toland Medical College, San Francisco, 1865, died at his home in San Diego, Cal., from chronic nephritis, March 7, aged 71.

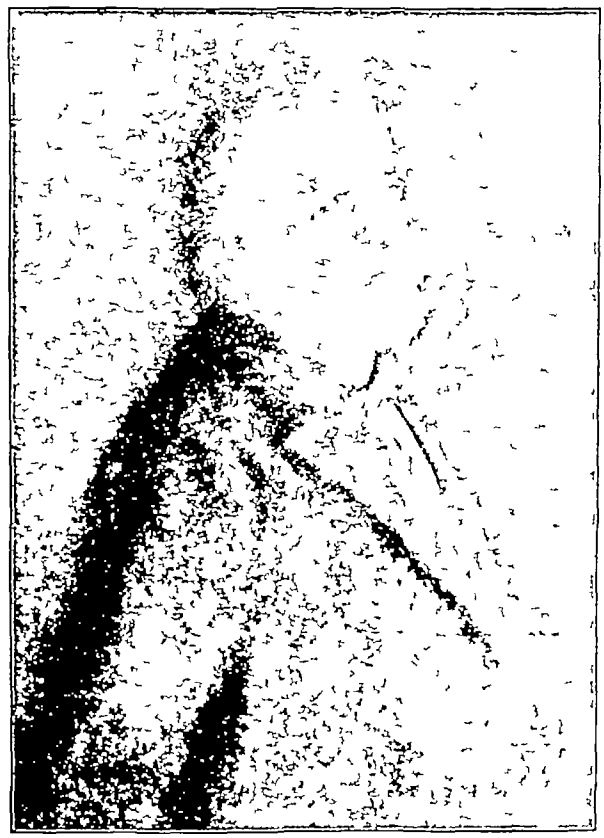
James Harper Worth, M.D. Pennsylvania Medical College, Gettysburg, 1857, the oldest member of the staff of Clifton Springs (N. Y.) Sanitarium, died at the sanitarium March 12, aged 83.

William A. Harris, M.D. Chicago Physio-Medical College, 1889, died at his home in Monee, Ill., from pneumonia complicating typhoid fever, March 6, after an illness of 10 days, aged 62.

Perie Comerford, M.D. Northwestern University Medical School, Chicago, 1903, died at his home in Appleton, Wis., March 9, from nephritis, after an illness of two years, aged 26.

Philip Barbour Pendleton, M.D. Jefferson Medical College, Philadelphia, 1845, died at his home in Cuckoo, Va., March 16, from paralysis, after an illness of several weeks, aged 89.

Joseph Henry Sweeney, M.D. Jefferson Medical College, Philadelphia, 1894, died at his home in Lehr, N. D., February 8, from pneumonia, complicating acute nephritis, aged 35.



ERNST VON BERGMANN

Henry H. McDonough, M.D. Cleveland Medical College 1876, for a number of years postmaster at Vanceville, died at his home in Claysville, Pa., March 16, from cardiac dropsy, aged 71.

James H. Anderson, M.D. University of Pennsylvania Department of Medicine, Philadelphia, 1848, died at his home in Easton, Md., March 11, from heart disease, aged 80.

Alois F. Hinz, M.D. University of Nebraska College of Medicine, Regular Department, Lincoln, 1886, died suddenly at his home in Minneapolis, Minn., February 28.

Daniel M. Foster, M.D. Louisville (Ky.) Medical College 1841, a pioneer resident of Bloomington, Ill., died at his home in that city, March 17, aged 90.

Deaths Abroad

Ernst von Bergmann, the eminent surgeon and leader of the medical profession in Germany died at Wiesbaden March 25, after an operation for appendicitis, aged 70. His seventieth birthday was celebrated Dec. 16, 1906, with great enthusiasm. He was born in Riga, Russia, and his brother is still a practitioner at Riga, while a nephew is a surgeon of Irkutsk, Siberia. He became prominent by his revolutionary ideas in regard to military surgery as he served in the Franco-Prussian and Turko-Russian campaigns, and was the first to advocate the rational or conservative treatment of wounds in war. After serving as professor of surgery at Dorpat and Würzburg, he was called to Berlin in 1882 as successor to von Langenbeck in the chair of surgery and he also assumed the editorship of the *Archiv f. klinische Chirurgie*, founded by von Langenbeck. Volume lxxxi of the *Archiv*, just published, is dedicated to von Bergmann. The first part is from his friends and colleagues, the second part from his present and former assistants. Some of the articles in it are devoted to the subject of brain surgery in which von Bergmann was the authority in Germany. Fischer ascribes his meteoric rise to prominence as due to his vast and successful literary work commencing with his publications on the causes of sepsis and its control by means of ferments in which he experimented among others with trypsin. In the course of this research he became infected and was critically ill with lymphangitis for a time. His tireless efforts to promote the welfare of the profession in every respect were gratefully lauded in the recent birthday speeches to which von Bergmann replied that he deserved no credit for what he had done—he had not been one of the pushers but only one of the pushed—it was the greatness of the times that had lifted him into prominence. He was very affable and yet dignified, liberal, hospitable and careful to observe all the niceties of professional etiquette. He had the largest clientele among crowned heads of any man in Europe and had been heaped with honors of all kinds including a life membership in the senate.

The present stage of organization of the profession in Germany is largely the result of his disinterested labors for all the material interests of the profession. In 1897 he summoned physicians and laymen to concerted action to secure proper provision for first aid in emergencies in Berlin with most successful results. He preached and worked for professional unity and organization attending nearly all the meetings of the local medical chamber, of which he was president and guiding its deliberations for years. The new system of free postgraduate lectures now in operation throughout Germany with courses in 38 cities and with its new central building, the Kaiserin Friedrich Haus at Berlin, where the museum, the offices and the flying exhibitions' are installed is a grand monument to his memory, as the inception and success of the whole scheme are largely attributed to his influence on the press, in the legislature and with persons of authority. He was president of the whole system and cooperated in the publication of its official organ the *Zeitschr. f. aerztliche Fortbildung*. He was also with König and Richter the publishers of the *Centrbl. f. Chirurgie*.

M. Duval, M.D., professor of histology at Paris and author of several works on anthropology, embryology and histology, including a manual of anatomy for the use of artists, died March 7, aged 63.

O. Israel, M.D., professor of pathologic anatomy at Berlin and formerly assistant to Virchow, died recently. Since Virchow's death he has been editor of Virchow's *Archiv*, which was continued by Orth, Virchow's successor in the medical faculty. Israel has published a number of works on congenital anomalies, circulatory affections, infections, tumors, cancer and the like.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION CONTRACT PRACTICE INSURANCE FEES MEDICAL LEGISLATION, ETC

Graduate Work in County Societies

The following letter has been received from Dr. W. C. Gates, Bucyrus, Ohio:

"For many years I have felt the need of systematic post-graduate medical study and I know that very many of my professional brethren feel the same need. The county society, while valuable, is far from working at its greatest efficiency. For several years I have been trying to think of some plan to reach the individual physician working alone, as well as those in a position to work in the local society.

"I think that the American Medical Association ought to take up some method of reaching and helping its members and others in postgraduate study at home. It has a building, printing plant and office force, and is well equipped for the work, and can do it cheaper and more efficiently than others. Again this work naturally falls to the Association. It will need but a few more good men to carry out whatever plan is adopted.

"Many of our universities are giving extension courses of study by correspondence, with credit and satisfaction. While a correspondence school of medicine would be ridiculous I think that a correspondence course of postgraduate study, conducted by the American Medical Association, would be practical, popular and most serviceable to the general practitioner.

"With good men at headquarters, outline courses of study could be prepared in pamphlet form on each of the various subjects of medicine and surgery. A graduate student (country physician or other) could send in for the pamphlet outline on any given disease in which he was most interested at the time. The instructors could answer his questions and give him the benefit of all that is valuable in the new books and journals on the subject in which he was interested. If the physician chose to take an examination in the subject, after a proper amount of study he could receive credit, and a certain amount of credits would entitle him to a certificate in the graduate work.

"Again, this idea ought to be modified for use through the county society. It would make the societies much more efficient and attractive, and would open up a wealth of material to its members and to the individual physician, which is at present inaccessible to them. It would bring to the Association reports of interesting cases which at present never find their way into print. This idea is practical, and can be worked out so as to be most efficient to the Association and of great lasting benefit to the individual professional worker."

Dr. Gates has outlined substantially the same plan that has been under consideration for several years past, but which has not been put into operation for various reasons. The advantages of such a plan are unquestionable. It is also probably true that something along this line will be inaugurated just as soon as there is a sufficiently wide interest taken to justify such a measure.

The Courtesies of Correspondence

Physicians as a class have at various times been accused of many shortcomings and delinquencies. Their sins of omission and commission have *varied in enormity* with the imagination of the accuser from blatant atheism to simple discourtesy. Like all sweeping generalities such charges are largely without basis. No set of men—no profession—has a monopoly either of vice or of virtue. It is admitted that physicians being human are liable to err, and that their lives being full ones such errors are apt to be those of omission. We were not surprised therefore when we received recently a letter from a physician in which he complains in strong language of the lack of courtesy among physicians as evidenced in correspondence. The particular shortcoming in this case was the failure of many physicians who had written for information to enclose a stamp for reply. While every thinking man knows that when writing a business letter that calls for a reply in which he alone is interested it is but simple courtesy to enclose a stamp, yet it is surprising how few men either in or out of the profession, live up to this axiom of business correspondence. And yet if faults are ever to be condoned, and if shortcomings are ever to be excused, we believe the case in point is one that calls for leniency of judgment.

The medical man in this country, thanks largely to the enterprise of the manufacturer of proprietary medicines, is simply deluged with mail of greater or less importance and value—usually less. Every nostrum vendor in the country seems to make it his duty to pour on the unoffending physician a cataract of form letters and literature. No small proportion of these letters request that the "Dear Doctor" write and relate his experience with this or that "proprietary"—but the infrequency with which such firms enclose stamps for replies is probably an indication of the number of answers they expect. It is not altogether to be wondered at, then, that the physician's feelings along this line become a little blunted. So that while we believe with our correspondent that as "members of a learned profession we should observe those little courtesies which are an index of intelligence and character," we would call attention to the reverse of the shield.

A Summary of the Insurance Fee Question.

At the quarterly meeting of the South Idaho District Medical Society, held at Weiser on January 15, Dr. Jesse C. Woodward of Payette read a paper on life insurance examination fees, giving a comprehensive summary of the life insurance situation, as well as the methods used in his district for obtaining an expression of opinion and concerted action from the medical profession. Dr. Woodward discussed the entire question at length, and closed his paper with this summary:

1. In a controversy over fees the examiner and not the company should determine the amount to be paid.
2. The statement of the companies that the reduction in fees is due to legislation is false.
3. It is not true that the companies are not able to pay a flat fee of $5.
4. It is impossible for an individual to combat immense splendidly organized concretions of capital.
5. The graded fee schedule so-called is a delusion and a snare.
6. Whatever the fee an honest examination should be given.

The companies will enforce their demands by

7. The discharge of the present examiners who refuse to make examinations for $3 or less.
8. The appointment of other and cheaper examiners.
9. The importation of permanent competing physicians.
10. The temporary introduction of physicians to do the examining or by the exportation of the applicant.
11. The employment of an examiner at a stated salary to do all the examining within a given area.

We may resist unjust coercion by

12. Organizing and standing together.
13. Individual effort to promote the signing and observance of a uniform agreement.
14. The formation of a state organization outside of the societies to work to this end alone as outlined.
15. Every man resolving for himself that no matter what others may do he himself will not examine for less than $5.

The following methods were used to elicit an expression of opinion from the members of the profession. A letter was sent to every medical man in the district, asking him to sign an agreement to make no old line examinations for less than $5. All of the physicians of New Plymouth, Weiser and Payette, Idaho, and Vale, Nyssa and Ontario, Ore., signed the agreement. A copy of this agreement, with the signatures, was then sent to every physician in the state of Idaho, enclosing a postal card on which was printed the same agreement. Out of 85 replies received at the time of Dr. Woodward's report, 75 were unconditionally in the affirmative, 9 were affirmative, with some conditions, and a single reply was negative.

What One Physician Is Doing in the State of New York

Dr. Samuel A. Gluck, Brooklyn, is the author of several very excellent bills that have been presented before the General Assembly of the State of New York, of which body he is a distinguished member.

The first is an act to amend the penal code in relation to cigar making, providing that it shall be unlawful for any persons *making cigars* to place any cigar or material comprising it to tongue or lips while in the progress of making. This is of the utmost importance to the public health as syphilis and other infectious diseases are often contracted by the habit which the bill seeks to suppress.

The second bill is an act regulating and restraining the practice of midwifery in the city of New York. The importance of such regulation is too obvious to require comment.

The third bill is an act to amend the public health law, extending the powers and duties of the health commissioner, and placing in his hands the proper disinfection of public buildings, railroad depots, coaches, sleeping cars, etc

Dr Gluck is a member of the public health committee of the General Assembly of New York, as well as a member of the Auxiliary Legislative Committee of the American Medical Association, and is a prominent, active worker in all things pertaining to public health It is to be hoped that these three bills will be adopted by the General Assembly

The Way One Problem Was Met

The necessity for concerted action on the part of the profession, if the agitation against the reduction of fees in insurance examinations is to be successful, is emphasized by *Southern Medicine and Surgery* in its December number In speaking of the problem to be met the editor says

"Occasionally individual members for imperative financial reasons feel that they can not yield their appointments even with reduced fees I know of such an instance which occurred recently in Georgia One of the most honorable members of a county society said he absolutely could not support his family and meet his obligations without his income from insurance examinations This exigency was promptly met when several of his more prosperous confrères visited him, expressed their appreciation of his situation, and offered to throw him sufficient work as anesthetist, assistant and otherwise, to permit him to lose if need be, his insurance appointments This resulted in a unanimous action on the part of that large county society, and exemplified a very practical and generous manner of avoiding individual embarrassment, yet achieving unity of action"

The Ingham County (Mich) Medical Society has issued a letter to its membership announcing the establishment of a post graduate course in the form of a series of clinical demonstrations For the March meeting lesions of the heart will be demonstrated In May different forms of tuberculosis will be shown The meeting in September will be devoted to skin diseases If this sort of work keeps up in Ingham County it will not be long before the members of the county society find that four meetings a year give them far too little time to do the work and carry out the discussions which they will find necessary A busy society always finds that its meetings are too short and too far apart

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The copy of the program of the Newcastle County (Del) Medical Society shows a membership of 65, with an average attendance for the past year of 20 The program for the January meeting was devoted to a symposium on eclampsia, papers being presented by different members of the society on etiology, diagnosis symptomatology, pathology, eye and nervous manifestations and treatment A general discussion closed the meeting

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Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed Queries for this column must be accompanied by the writer's name and address but the request of the writer not to publish name or address will be faithfully observed

YOHIMBIN

—— ILL March 20 1907

To the Editor: —Kindly inform me regarding yohimbin its origin use and dosage as I am unable to find anything in the literature at hand L R K

ANSWER—The following description of yohimbin is given by Sollmann (Text book of Pharmacology 2d edition p 225) Yohimbin ($C_{21}H_{26}N_2O_3HCl$) is an alkaloid isolated by Spiegel (1896) from the bark of the Yohimbehe tree (family of *Apocynaceæ*) growing in German West Africa The local application (1 to 2 per cent. solution) produces the same anesthetic effects as cocain and is less toxic. The effect begins in 10 to 15 minutes and lasts ½ to 1¾ hours. The vessels are rather dilated even when adrenalin is added In the eye the anesthesia occurs more promptly (½ to 1 minute lasting from 10 to 15 minutes) It should not be used in this organ since it causes considerable irritation lasting 4 to 6 hours Accommodation is but little affected When it is given by the mouth or hypodermically in moderate doses it produces a general vasodilation in the skin mucous membranes and particularly in the sexual organs In consequence of the latter and perhaps by a direct action of the spinal centers it produces erection It does not seem to stimulate the production of spermatozoa or sexual desire

In consequence of this action on animals the alkaloid has been used as an aphrodisiac in neuropathic impotence apparently with fair success The reports must be accepted with caution considering the possibility of psychic suggestion The effect in animals occurs immediately that in man only after some four to six weeks. This makes it difficult to explain the clinical observations by the animal experiments The continued administration of the alkaloid is said to lead to no bad effects however the resemblance of its actions to those of cocain would suggest that it may perhaps create a habit Ordinary doses produce a psychic excitement similar to that of cocain (this has been referred to dilation of the cerebral vessels) There is also some distension of the cerebral vessels and vertigo Gastric disturbance has been noticed The effects of larger doses also agree with those of cocain Toxic doses cause general stimulation and subsequent paralysis of the nervous centers particularly in the medulla Death occurs by respiratory paralysis (Loewy and Mueller Muench med Wochsch No 15 1903)

The free alkaloid and the solutions of the hydrochlorid being unstable, the dry salt is marketed in the form of tablets containing 0 005 gm (1/12 grain) three tablets per day are the ordinary dose

According to A Loewy (Therapie der Gegenwart December 1906) *yohimbin has been applied successfully in several cases to* secure the return of the rut in cows bitches and sows He thinks this offers encouragement for its use in women where sexual frigidity is complained of Several authors have used it for this purpose with favorable results among them Kronfeld Fuler Rolle Fopp and Berger Schalenkamp on the other hand could not observe any effect in a case under his care Loewy thinks that it will be useful in cases of irregular and scanty menstruation and cites favorable reports by Simons Schalenkamp and Toff He thinks it should also be recommended in premature occurrence of the *menopause*

THE FIRST FRENCH PUBLICIST

PHILADELPHIA March 20 1907

To the Editor —In your editorial on page 2016 of THE JOURNAL Dec 15 1906 about the middle of the first column you say Thirteen years later the Paris faculty found itself impelled to decree the free use of antimony Is it a fact that the faculty decreed the use of antimony and what right had the faculty to decree anything? S H

ANSWER—At that time the Faculty of Medicine of Paris exercised a great deal of autocratic power in medical matters The introduction of antimony and other clinical medicines by Paracelsus (1490 1541) and his followers was opposed not only by the faculty in Paris but also by other bodies of similar scope as for instance the College of Physicians and the Society of Apothecaries in England In Paris the struggle was especially bitter Owing to the favor of the king (Louis XIII) and Cardinal Richelieu Renaudot was able to maintain himself in spite of the opposition of the faculty which allowed no one but those promoted by itself to practice in Paris When Richelieu died the faculty cancelled Renaudot's license In the meantime Renaudot and others had spread the knowledge of the therapeutic use and value of antimony and eventually the Paris faculty withdrew its opposition to antimony (presumably by virtue of established custom and privilege) and formally decreed that its free use was permitted

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The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers U S Army week ending March 23 1907

Appel A H surgeon the leave granted in S O 24 Feb 1 1907 Philippines Division is extended two months and fifteen days

Banister William B surgeon relieved from duty at Jefferson Barracks Mo and will proceed to San Francisco and take transport to sail from that place about April 5 for the Philippine Islands and on arrival at Manila to report to the commanding general Philippines Division for assignment to duty

Pitch Edwin W asst surgeon will accompany the battalion of the 2d Infantry at Fort Ontario to Jamestown and on arrival to be assigned to duty as surgeon of that regiment.

Nelson Kent asst surgeon will proceed from Fort McHenry Md to Fort Myer Va in due time to accompany the 3d Battery Field Artillery from that post to Jamestown and remain with it during the encampment.

Panister John M deputy surgeon general left Omaha on 14 days leave of absence.

Crosby Wm D surgeon ordered to accompany Company L. 14th Infantry from Vancouver Barracks Wash to Presidio of Monterey Cal

Waleman Wm J surgeon died at hospital Fort Monroe Va March 20 1907

Farr Charles W asst surgeon granted 3 months leave on surgeon's certificate of disability

Morris Samuel J asst surgeon granted leave of absence for 21 days effective May 25 1907

Collins C C asst surgeon granted 2 months and 20 days leave of absence

Steer Samuel L. asst surgeon the resignation of his commission as an officer of the Army has been accepted by the President to take effect July 1 1907

Smart Robert asst surgeon ordered to report in person on Tuesday May 14 to Major William C Borden surgeon president examining board Army Medical Museum Building Washington D C for re examination to determine his fitness for advancement

The following named first lieutenants asst. surgeons will report in person on the dates specified to Major William H Arthur surgeon president examining board at Army Medical Museum Building Washington D C for examination to determine their fitness for advancement

April 23 1907 Nelson Gapen William T Davis
April 30 1907 Charles F Morse William M Smart
May 7 1907 Will L. Pyles Carv A Snoddy
May 14 1907 Haywood S Hansell Jay W Grisinger
Charles C Billingslea

The following named first lieutenants asst surgeons will report in person on the dates specified to Lieut Col Geo H Torney deputy surgeon general president examining board at the General Hospital Presidio of San Francisco for examination to determine their fitness for advancement

April 23 1907 Louis C Duncan William L. Keller Harold W Cowper
May 14 1907 Samuel I Lambert Clarence H Connor
May 21 1907 Junius C Gregory Harry S Purnell
June 18 1907 Robert M Blanchard

Rhoads Thomas L. asst surgeon will in addition to his present duties assume charge of the office of the chief surgeon Department of the Missouri. In the performance of this duty Captain Rhoads will make not to exceed six trips each week from Fort Crook Neb to Omaha and return.

Wing Franklin I dental surgeon left Fort Robinson Neb and arrived at Fort Mackenzie Wyo for duty

Chambers William H dental surgeon relieved from duty in the Philippines Division in time to sail May 15 for the United States for station

Voorhies Hugh G dental surgeon relieved from duty in the Philippines Division in time to sail for the United States on the transport McClellan for station

Sanford Joseph L. contract surgeon ordered to accompany 27th Battery Field Artillery from Fort Ethan Allen Vt to San Francisco and then return to proper station Fort Washington Md

Greenwell Samuel A contract surgeon granted leave of absence for one month

Love Joseph W contract surgeon arrived at San Francisco from Philippine service and ordered to Fort Preble Me for duty

Brown Polk D contract surgeon arrived at San Francisco from Philippine service and ordered to Fort St Philip La for duty

Navy Changes

Changes in the Medical Corps U S Navy for the week ending March 23 1907

Scott T W pharmacist ordered to the Naval Academy

Curl H C. surgeon ordered to the U S Naval Medical School Washington D C.

Brooks I H asst surgeon detached from the Naval Hospital Mare Island Cal ordered to the *Annapolis*

Bagg C I and Alfred V R., surgeons ordered to Washington D C April 15 for duty on course of instruction at the U S Naval Medical School

Holcomb R C P A surgeon detached Naval Station Culebra W I to Washington D C April 15 for duty on course of instruction at the U S Naval Medical School

Shaw H P V surgeon detached Naval Hospital Pensacola Fla. ordered to Naval Station Culebra W I

Waggener J R medical director ordered to Naval Recruiting Station Providence R I April 1

Payne J H I V surgeon detached Naval Recruiting Station Providence R I ordered to Washington D C April 15 for duty on course of instruction at the U S Naval Medical School

Public Health and Marine-Hospital Service

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended March 20 1907

Wertenbaker C P surgeon granted leave of absence for 3 days from March 18

Gardner C H P V surgeon detailed as a member of the Revenue-Cutter Service Retiring Board convened to meet in San Francisco Cal. April 2

von Ezdorf R H I V surgeon relieved from duty at Havana Cuba and directed to proceed to New Orleans reporting arrival by wire

Hoyle W C I V surgeon detailed as a member of the Revenue-Cutter Service Retiring Board convened to meet in San Francisco Cal. April 2 1907

King W W P A surgeon directed to proceed to Missoula Mont via Chicago for special temporary duty on completion of which to rejoin his station at Hygienic Laboratory Washington D C

Fox C P A. surgeon directed to proceed from Port Townsend Washington to San Francisco Quarantine Station for duty and assignment to quarters

Amesse J W P A surgeon leave of absence granted for 14 days from May 4 amended to be effective May 14 1907

Berry T D P A surgeon granted leave of absence for 1 day

Lloyd B J P A. surgeon granted leave of absence for 2 days from Feb 8 1907

Campbell Clarence R acting asst surgeon granted leave of absence for 3 days from March 12 1907 under paragraph 210 of the Regulations

Primrose R S acting asst surgeon granted leave of absence for 3 days

Terry M C acting asst surgeon granted leave of absence on account of sickness for 30 days from Jan 1 1907, and 30 days annual leave from Jan 31 1907

BOARDS CONVENED

A board of medical officers was to meet at the Bureau at 10 a m., April 15 1907 for the purpose of examining applicants for the position of assistant surgeon in this Service Detail for the board Surgeon L. L. Williams chairman P A Surgeon H S Mathewson P A Surgeon Joseph Goldberger Recorder

A board of medical officers was to meet at Boston March 21 1907 for the physical examination of an officer of the Revenue-Cutter Service and an applicant for the position of second assistant engineer Detail for the Board Surgeon R M Woodward chairman and P A Surgeon B S Warren, recorder

Health Reports.

The following cases of smallpox, yellow fever cholera and plague have been reported to the Surgeon General Public Health and Marine-Hospital Service during the week ended March 22 1907

SMALLPOX—UNITED STATES

California San Francisco March 2 9 1 case
Illinois Chicago March 9 16 5 cases
Indiana Indianapolis Feb 24-March 10 9 cases
Iowa Davenport, March 1 15 1 case
Kansas Lawrence, Feb 1 28 1 case Topeka March 2 9, 5 cases.
Louisiana Shreveport, Feb 23 March 2 1 case
Ohio Cincinnati March 8 15 1 case Cleveland 1 case
Pennsylvania *Homestead* Feb 25-March 7 2 cases
Tennessee Nashville, March 9 16 1 case
Wisconsin Milwaukee, March 2 9 2 cases

SMALLPOX—INSULAR.

Philippine Islands Mariveles Quarantine Jan 26-Feb 2 (on S S *Pioneer*)

SMALLPOX—FOREIGN

Africa Cape Town Jan 26-Feb 2 1 case
Argentina Buenos Aires Jan 12 26 12 cases 3 deaths
Brazil Bahia Jan 12 Feb 16 26 cases 1 death Para Feb 2 9 1 case Pernambuco Jan 15 31 60 deaths Rio de Janeiro Feb 2 9 1 death
Canada Digby County N S Feb 2 9 36 cases 3 deaths
Chile Coquimbo, Feb 6 25 cases 2 deaths
China Shanghai Jan 6-13 1 case, 1 death
Columbia Cartagena Feb 24 March 3 3 deaths
Ecuador Guayaquil Feb 16-23 2 deaths
Egypt Cairo Feb 18 25 3 cases 1 death
France Marseilles, Feb 20 March 6 epidemic
Great Britain Cardiff Feb 23 March 2 2 cases Hull Feb 16-23 2 deaths Newcastle-on Tyne Feb 16 23 1 case
India Calcutta Feb 2 9 50 deaths
Italy General Feb 1 28 7 cases
Mexico Aguas Calientes March 2 9 2 deaths
Netherlands Rotterdam Feb 23 March 2 1 case
Russia Odessa Feb 16-23 28 cases 7 deaths
Siberia Vladivostok Jan 21 28 1 case
Spain Malaga Feb 16-23 1 death
Turkey Constantinople Feb 17 March 3 3 deaths

YELLOW FEVER—UNITED STATES

Texas Galveston March 17 1 *case* 1 *death (from S S Bash* from Para)

YELLOW FEVER—FOREIGN

Brazil Para Feb 2 23 1 case 6 deaths Rio de Janeiro Feb 2 9 1 case.
Ecuador Guayaquil Feb 16-23 7 deaths

CHOLERA—INSULAR

Philippine Islands Provinces Jan 6 12 43 cases 23 deaths

CHOLERA—FOREIGN

Ceylon Colombo Jan 26-Feb 2 1 case 1 death
India Calcutta Feb 2 9 105 deaths

PLAGUE.

Argentina Buenos Aires *Jan 12 26 3 cases 1 death*
Australia Brisbane Jan 12 19 8 cases 1 death
Brazil Bahia Jan 1-Feb 16 4 cases 6 deaths Para Feb 2-9 9 deaths
Chile Antofagasta Feb 6 14 cases 6 deaths Santiago Feb 2 present
China Niuchwang Jan 23-30 30 cases 26 deaths
Egypt Provinces Beni Souef Feb 15 1 case 1 death Cuerna Feb 17 21 4 cases 4 deaths Kena 4 cases 4 deaths Kouss Feb 21 1 case 1 death Minieh Feb 19 21 4 cases 4 deaths
India General Jan 26-Feb 9 20 262 cases 29 706 deaths Calcutta Feb 2 9 21 deaths
Peru Callao Feb 8 16 1 case Chiclayo Feb 7 6 cases 6 deaths Ferrenafe 7 cases 7 deaths Lima 6 cases 4 deaths Mollendo 1 case Pacasmayo 2 cases 1 death Pueblo Nuevo 2 cases Trujillo 12 cases 2 deaths

Miscellany

AN APPRECIATION OF THE LATE DR. GEORGE CHISMORE OF SAN FRANCISCO

By Douglas W Montgomery, M D

SAN FRANCISCO

Robert Louis Stevenson once put forward, as an ideal life, an adventurous youth and a serene and prosperous old age. He may have been thinking of his friend, George Chismore, whose youth was spent in the sough of the forest and the surge of the ocean, and whose latter days were passed in the kindly practice of the most beneficent of professions The following anecdotes will probably give a more vivid picture of his sympathetic nature than any detailed description

A salient feature of George Chismore's character was self respect, and he frequently jokingly remarked that he did not need other people's respect, as he furnished such a fine brand of the article for home use He loved to tell stories, especially Scotch ones, bearing on self respect.

Chismore followed many vocations in his day, and among others had been a dentist, and as he used to remark, "a good one, too" Even after he began the practice of medicine this was of use to him, as in the early days here the general practitioner, as Chismore then was, did everything One day an old Scotchman called at the office holding his jaw, and with an expression of pain, asked

"Can ye pull a tooth?"

"Yes, I can"

"How much will ye charge me?"

"Two dollars and a half" The usual fee for an office consultation in those days

"I winna pay it" And the old man, still with his hand to his jaw, turned to leave

"Stop," said Chismore, "it is a rule with me never to allow a man to leave this office suffering pain, if I can alleviate it I'll pull your tooth for nothing"

"I'll noo do that neither" And the old man pursued his course with relentless pertinacity and self respect.

If a man properly esteems himself and his own rights, it is the nearest way to get a just idea of the rights of his fellows The following will throw a clear light on Chismore's ideas in this regard

Chismore and I were in the smoking room of a train coming from Chicago, when he fell to telling of having been called not long before to Monterey to see a patient, an elegant looking, elderly Englishman, refined in dress and in speech The patient soon began talking of diamonds and of some mines in which he was interested, and showed several fine stones both cut and in the rough He then, said Chismore, proceeded to relate how those stones were obtained, and in doing so detailed, but without the least appreciation of its horror, one of the most glaring crimes against human dignity He told how they hired negro miners by contract, shut them up in a corral, and at the end of their term, after purging them, searched them in the most intimate recesses of their bodies "Now" said Chismore, "what can be the moral attitude of a man, turned loose on the desert with the little money owing him flung at him, and after such a search?" "But," said a picture dealer who was present, "if the owners didn't do that the men would steal" "Well," said Chismore, "if every man who had the opportunity to steal were so searched, very few of us would escape the painful experience" The picture dealer subsided

The above shows an admirable feature of Chismore's character, and one that I am afraid we medical folk are apt to become dulled in, a keen appreciation of sexual shame and privacy We become so used to seeing human nakedness exposed that we finally, if not on the alert, begin to lack the sense of one of the most beautiful of human attributes, and one the piety of which we can not afford to transgress

Another story Chismore loved to tell was of a man who was relating the way some capitalists from Europe, on a famous railroad inspection tour in 1883, treated the people of the country through which they passed As he told of insolence after insolence committed by some of these, the bystanders vented their indignation in picturesque frontier language against the perpetrators, all but an old Scotchman who stood silently by "Well, Donald, what do you think of that?" said the speaker as he related a particularly striking instance of brutal impudence "Dom the people that'll stan' it!" was the deliberate and emphatic response This was a view directly after Chismore's own heart, for the old Scotchman had hit the nail on the head, and Chismore wrung the old man's hand in lively appreciation of the sentiment.

Many a time have I thought of this while reflecting on the arrogant, insolent and high handed manner some of the English fire insurance companies are exhibiting in settling their losses in this city "Dom the people that'll stan it!"

The following can only be appreciated by knowing the Highland characteristic of being laconic, and of calling everything "she" It is said of a Highlander that he calls everything she but his wife, and that's he The scene of the incident was, if I am not mistaken, the Hudson Bay Company's factory in Vancouver The floor was of hardwood, and was as smooth as glass, and highly polished by grease and by the moccasined or bare feet of the Indians An Indian was seated on the floor facing the wall at one end of the apartment, lost in contemplation after the manner of his kind An old Scotchman was standing in the middle of the room examining a gun, a beautiful piece of mechanism It was double barreled, one barrel a rifle and the other a shot gun, and the barrels swung on a swivel, so that they came into place as required The Scotchman was holding the gun in the bend of his left arm and amusing himself by swinging one barrel and then the other into place. The day before he had been doing the same thing in the open, and one of the barrels had accidentally gone off This time the same accident again happened, and the shot gun went off with a bang, the shot striking the hard polished floor a short distance this side of the Indian, and ricochetting into his body He sprang up with a yell, and disappeared rapidly through the door and down the street The Highlander looked up quietly and remarked of the gun in an even voice, "She'll kill some body yet"

Chismore lived long in Alaska, and delighted to tell of his experiences with the Indians, to whom he was much attached He at times regretted leaving there, and thought that possibly he had made a mistake in coming back to civilized life In fact, he at one time applied to the Smithsonian Institute to secure a pension in his old age, should he spend his life in noting the Indian habits He wished the old age pension because the Indians then neglected their aged, and frequently killed them as other savages do One of his Indian tales was very amusing

One day while walking along the seashore he saw an Indian acquaintance bathing in a pool that was partially frozen over

"What are you doing in there, Joe? Isn't it cold?"

"Stay here ten minutes—keep warm all day—no chop wood"

"That's right" said Chismore, "do anything to avoid cutting wood"

I suppose the Indian was a lineal descendant of Adam, who was so sure that work was a cursed thing

At one time Chismore was a contract surgeon in the United States Army, and camped from spring to spring through that desert that is now fertile southern California, and pushed on still farther south As the troops approached the Gila river, Chismore and the officer in charge were somewhat in the rear, but on spying the flowing water they hastened their steps to enjoy a bath after their hot dusty march They quickly stripped and plunged in the river, but instantly scrambled to the shore again, for the water was scalding hot They then realized why a row of naked privates were seated on a bluff nearby grinning from ear to ear They had had the same luck, and were waiting to see the captain and doctor [illegible]

Later on Chismore's fate led him to settle in San Francisco where I first met him shortly after my arrival here [illegible] He and Harry M Sherman had the strange [illegible] ever seen It consisted of four rooms, a large [illegible] three toward the rear One of the latter was [illegible] room, and the head of his bed was on a line [illegible] door and also with the front door A man [illegible]

bed commanded both doorways, and when Sherman first went in with Chismore he was warned, if he came in late at night, that he must answer immediately if hailed, as otherwise he might be shot In those days Chismore never locked the front door, although it led directly downstairs into Market street, the chief thoroughfare of the city The gun was the only door lock, for that was the law of the frontier After a time his friends prevailed on him to lock his door for their sake if not for his own The day following this innovation a thief broke in and made a large haul Chismore explained to his friends the folly of their advice, but nevertheless always afterward locked his door

The rooms were low ceiled and dingy looking, the carpets matched, and when I tell you the treatment Chismore's bed received you can imagine its appearance Sherman's office hours ran from 11 a m to 1 p m, and Chismore's from 1 to 3 p m My office was in another locality, but being new to practice and having nothing to do, and Sherman having a like amount of occupation, I used to visit Sherman during his office hours, and we would stretch out on Chismore's bed and practice pistol shooting across the foot of it at a mark on the opposite wall By this means, and by telling stories and in musing on what we would do when we should have a large practice, we managed to kill the tedious hours We were rarely interrupted by patients, all these came in the afternoon during Chismore's hours One great comfort of the bed was that one could lean over anywhere and pick off the floor a piece of jerked venison, the fruit of the doctor's many hunting expeditions I never heard that Chismore complained of the appearance or of the discomfort of his bed, it would have been unlike him to have done so

Stacked against, and hung around, the walls were guns rifles, pistols and totem poles, and among these were beautiful pictures, for Chismore was always found of art There were books too, for the man loved reading In the most remote room was an elaborate set of tools for working in iron, an occupation he was always fond of, and which he turned to good account in perfecting his lithotrite

Chismore once told us in these days when we were waiting for our luck, of his own first hardships in getting a practice At one time he had not enough money to get ordinary food, and lived on milk alone While doing this he used to run a given stretch each day to test his strength, and to find if he were failing I think he said he kept this up for a week, and then on getting a fee, he gave himself a French dinner, the like of which he never afterward ate He rapidly acquired a remunerative practice, and in so doing he had many strong aids In the first place he had the solid basis of working hard and ingeniously for the comfort and recovery of his patients, and in the second place he loved his fellow man and his fellow man knew it, and thirdly, he was a born optimist He was fond of his patients and never believed that anything so mean as disaster could befall them, and heartened them by assuring them of it A physician is more kindly remembered by the hopeful things he says to his patients than for his sinister prophesies, no matter how scientifically accurate these may be

Chismore was as tolerant of human imperfections as Anatole France At 2 or thereabouts in the morning a rap would occasionally come on the front door A wreck of a man with one eye would enter and walking over to Chismore's bed would waken him Chismore would fumble in his pockets for 50 cents hand it to the man, and turn over to sleep The wreck would try to close the door as softly as possible, but it always made a sharp clir r r in the hollow night, for it was a frail structure with many panes of glass in its upper part. Unsteady steps descended the stairs and all became silent as before One morning the exasperated Sherman told Chismore that the next time that miserable beggar would come he would fire him "No don t do that," said Chismore "he is a morphin fiend and only comes to ask help under the extremest pinch of necessity"

Though kindness itself to those who relied on him he had no patience with the arrogant rich He was called once to see a very rich man, who had come by his wealth suddenly in a mine and who was suffering from hemorrhoids During the examination the patient was as insolent as his nature constrained him to be, and Chismore returned immediately to his office, wrote out a bill for a good fee, and forwarded it by a messenger boy The boy quickly returned with the money, and Chismore considered his connection with the case closed The day following, however, he was sent for again, and, on arriving, found his majesty the brute tamed An operation was proposed, assented to and performed, and the patient, after the operation, was particularly admonished against getting out of bed or sitting up On entering the room at the next visit what should Chismore see but the patient sitting in a chair before the fire He was leaning forward, and as the doctor entered he half turned his head and leered that evil smile that we all of us have seen when an ill natured patient thinks he has gotten ahead of the doctor Chismore stopped short, pointed his finger at the bed, and said "You get back there or I'll lick you" The patient slid quickly into bed, drew up the clothes and looked timidly over the sheets at Chismore, who was now standing at the foot. Chismore explained in vigorous English, in which he was particularly felicitous when aroused, that he had not sought the operation, but that once having operated he was responsible for the result, and that being so, his orders had to be obeyed and punctiliously, or there would be trouble On such occasions he gave utterance to remarks that induced reflection The man made a good recovery, and in afterward recommending a patient, said that Chismore was a fine doctor, but a little hasty tempered

Toward the end of his days Chismore's naturally fine shrewd face grew ethereal looking, and even more noticeably kind If there is a Heaven, George Chismore will surely be in it, and if there are other human beings there he will enjoy himself

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The Physician, the Brain, the Surgeon, the Hands—An article is going the rounds of the medical press abroad which affirms that when the family physician decides that an operation is necessary he should take complete charge of the case as the contractor takes charge of a building to be erected "Medical practice," the writer says, "will become what it should be when the surgeon is put in his proper place, which is in a position subordinate to the physician The physician should diagnose and plan the operation, should select the surgeon, and the fees should be fixed by the physician, the bill be rendered by him, and paid to him The amount charged should be commensurate with the responsibility incurred and the patient's pecuniary position" The article (*Gaz Méd Belge*, March 7) continues to the effect that when an individual applies directly to a surgeon and there is no emergency, the surgeon should refer the patient back to a physician, saying that he does not know whether medical measures have been tried to the fullest extent, and, if operation is necessary, he must first consult with a physician knowing something of the constitution and clinical past of the patient The writer continues "Many surgeons would be astonished if we were to tell them that they rob their medical confrères of hundreds of dollars every year by their present methods, and to the direct detriment of their patients"

Sale of Drugs in Turkey—The Constantinople correspondent of the *Lancet* states that several fatalities are reported as the result of selling drugs to the public without a prescription A law exists in the Ottoman Empire prohibiting this, but like many other good laws in Turkey it remains a dead letter for lack of a strong will and hand to compel its enforcement All kinds of drugs, even the most poisonous have been sold by all kinds of shops to any one on demand The abuse has been especially great with regard to proprietary articles, the composition of which is unknown The law entrusts the whole matter to the prefecture of the city and this in turn, has to see that every medicine and pharmaceutical preparation is sold to the public only by authorized duly qualified pharmacists and officially recognized specialists and only then when the properly signed prescription of a medical man is presented Recently a new official communication has been sent to all the pharmacists and druggists in Constantinople reminding them of the law and calling attention to the penalties that will follow further indiscriminate sale of drugs

Book Notices

SYLLABUS OF LECTURES ON HUMAN EMBRYOLOGY An Introduction to the Study of Obstetrics and Gynecology for Medical Students and Practitioners By W P Manton M.D Third Edition Revised and Enlarged Cloth Pp 136 Price $1 25 net. Philadelphia F A Davis Company 1906

While this work is especially designed for, and will be found particularly useful to, students in their first and second years at college, it is also a desirable manual for review and reference for the general practitioner It is not intended to take the place of the exhaustive text books on embryology, but is primarily for use in the class room, supplementary to the lecture, and for laboratory guidance It can also be used for self instruction and in laboratory work in connection with the usual text books The present edition has been carefully revised and many new illustrations have been added

RETINOSCOPY (or Shadow Test) in the Determination of Refraction at One Meter Distance with the Plane Mirror By J Thorlington A.M, M D Author of Refraction and How to Refract etc. Fifth edition revised and enlarged, with fifty four illustrations ten of which are colored Cloth Pp 67 Price $1 00 net. Philadelphia P Blakiston s Son & Co 1907

In this new edition much that is modern and valuable is added to a work already recognized as a standard Many new instruments have been added, notably an illustration of the DeZeng luminous retinoscope, with a description of its mechanism and method of application The colored plates illustrating the pupillary reflexes seen in the different forms of refractive error are particularly good

PRACTICAL TEXT BOOK OF MIDWIFERY FOR NURSES By R Jardine, M D M R C S F F P and S, F R S Professor of Midwifery in St Mungo s College Glasgow etc. Third edition Cloth Pp 276 Price $1 50 net Chicago W T Keener & Co 1906

This book is based on lectures delivered to nurses of the Glasgow Maternity Hospital and is primarily intended as a text book for them The book, as the author admits in the preface, may be considered rather too comprehensive for nurses but he states that midwives are a very old institution and are likely to continue in existence so long as the poor are with us, and that those who teach them should endeavor to make their training as thorough as possible

NATURE AND HEALTH A Popular Treatise on the Hygiene of the Person and the Home By E Curtis A.M M D Emeritus Professor of Materia Medica and Therapeutics Columbia University New York. Cloth Pp 313 New York Henry Holt & Co 1905

In this book the author considers briefly the most important points in hygiene and sanitation The book is intended for the laity and is written in simple language The deficiency of air space in the average dwelling is commented on and directions are given for ventilating The author regards the open fire as ideal and prefers hot water heat to steam or hot air Singing as a general adjuvant to the well being of the breathing apparatus and, indeed, of the whole economy, is recommended The comparative value of the different foodstuffs is considered and the author calls attention to the evils of over eating as well as of under feeding He discusses the importance of a pure water supply and mentions the various methods of purification Subsequent chapters take up Seeing hearing, clothing, disposal of waste, disinfection exercise of body and mind, sleep, work and play, living and dying

PATHOLOGY OF THE EYE By J H Parsons B S D Sc F R C S Assistant Ophthalmic Surgeon University College Hospital etc. Vol III General Pathology—Part I Cloth Pp 1128 Price. $3 50 net New York G P Putnam s Sons 1906

In this volume Parsons takes up the subject of the general pathology of the eye, including congenital abnormalities, ametropia, the circulation and nutrition of the eye, the normal intraocular pressure and glaucoma Nearly one-half of the book is devoted to the congenital abnormalities of the eye. An exhaustive résumé of the literature of this subject is presented, and there are many illustrations, both macroscopic and microscopic Myopia is the subject of one of the most interesting chapters of the book The various changes in the ocular tissues are taken up separately and explained on an anatomic and pathologic basis Here, as throughout the work, are to be found exhaustive references to the literature. This particular feature makes the work invaluable as a source of reference In the chapter on the circulation of the eye the author has drawn freely on the material furnished by the experiments of Leber in this field. In addition to the studies made on the circulation of the human eye, comparative studies of the circulation of the eye of the dog are given The subject of glaucoma begins with the discussion of the normal intraocular pressure The various forms of apparatus for measuring this pressure are illustrated and their manner of application explained This is probably the most interesting portion of the book, embodying as it does the essentials of all of the theories and studies on this important subject. The pathologic studies of glaucomatous eyes are well illustrated and thoroughly discussed.

HEALTH TALKS ABOUT CHILDREN A Plea for the Child By J Grimshaw M D B S Second Impression Paper Pp 83 Price, 40c. Philadelphia P Blakiston s Son & Company 1906

This book consists of a series of talks delivered to mothers The language used is clear and forceful, and free from technicalities Directions are given for feeding the child—preparing its food, etc—caring for it in health and sickness, and diet of the mother An appendix contains a list of things to do and not to do, and dietary lists The book is a valuable one for mothers

GYNECOLOGICAL DIAGNOSIS A Manual for Students and Practitioners. By A. E Giles M D B Sc F R C S., M R C P with 35 Original Illustrations Cloth Pp 212 Price $2 50 net New York William Wood & Co

In an introductory chapter the author calls attention to the fact that the expert diagnostician makes the most successful practitioner and mentions the difficulties encountered in acquiring the necessary experience in gynecologic work Instead of taking a disease and naming the symptoms, thus reasoning from cause to effect, Giles takes the predominating symptom or symptoms and reasons back to the cause Part 1 considers the methods of recording history, present condition, treatment and after history, with methods of examination, instruments, significance of symptoms and physical signs Part 2 is devoted to diagnosis of individual cases from leading symptoms

DISEASES OF THE STOMACH AND INTESTINES with an Account of Their Relations to Other Diseases and of the Most Recent Methods Applicable to the Diagnosis and Treatment of Them In General By B Reed M D Second Edition Cloth Pp 1021 Price, $5 00 New York E B Treat & Co 1907

This book retains the lecture form with a certain familiar style of diction which serves to lend impressiveness to what the author has to say, although his method tends to interfere somewhat with the systematic presentation of the subject Comparatively little space is given to pathologic anatomy, while, on the other hand, some unnecessary subjects, such as urinalysis, are included, presenting merely repetitions of what can be found in text books on clinical diagnosis The work has an advantage in that it combines in one volume the diseases which are generally found combined in practice

INDICATIONS FOR OPERATION in Disease of the Internal Organs By Prof. H Schlesinger M D Extraordinary Professor of Medicine in the University of Vienna Authorized Translation by K W Monsarrat, M B F R.C.S Surgeon to the Northern Hospital Liverpool Cloth. Pp 408 Price $3 00 New York E B Treat & Co 1906

As stated in the preface by the author, this work is intended essentially for the practitioner as a guide in determining the necessity for surgical interference in diseases of the internal organs In this it is highly successful With small exception the indications given are in accord with sound modern surgical principles The value of the book is enhanced by concise but clear setting forth of the etiology clinical course, pathologic anatomy and diagnosis of internal surgical diseases with much useful information as to the results of operative interference

ESSENTIALS OF HUMAN PHYSIOLOGY By D [illegible] B Sc. F R C.P., Ed. Superintendent of the Research Laboratory of the Royal College of Physicians of Edinburgh Second edition revised and enlarged Cloth. Pp 444 Price [illegible] W T Keener & Co 1905

This is not the sort of text [illegible] whose interest in medical [illegible]

shall be taught the biologic sciences as sciences, and not as something from which a few kernels are to be gleaned for their value to medicine, the rest to be discarded as worthless While the book is as full and accurate as this sort of book can be expected to be, yet it represents the unfortunate compromise between quiz compend and text book that is so popular with a certain class of medical students and instructors Students who are brought up on this type of book can hardly be expected to develop that investigative frame of mind which is essential to the student who is to do his own thinking, instead of relying implicitly on any "authority" who speaks to him from the printed page Let it be understood that we are not condemning the present book in particular, but rather deploring the fact that there still seems to be a market for the type of book it represents This book is now in its second edition, and has the advantage of being fairly modern in its handling of the subject of physiology It does not seem to possess any peculiar merit beyond this, and, of course, is not to be compared with several larger text books that seek to avoid the criticisms mentioned above It must be added, also, that the illustrations of histologic structures are so imperfect and crude that they at once prejudice the reader against the text that accompanies them

ELEMENTARY MANUAL OF REGIONAL TOPOGRAPHICAL DERMATOLOGY By R. Sabouraud Director of the City of Paris Dermatological Laboratory St Louis Hospital English Translation by C F Marshall Cloth Pp 570 Price, $5 00 New York Rebman Company 1906

As indicated by the title, this volume differs from other works on dermatology by describing the various lesions, not according to their nature, but according to their location Thus, under "Nose and Cheeks" are described all the lesions likely to occur on these parts of the body The arrangement is slightly confusing to one accustomed to the classification ordinarily adopted in works on dermatology, and its practical usefulness remains to be demonstrated The descriptions of the lesions and the illustrations are good, but more space might be devoted to treatment

ATLAS AND TEXT BOOK OF DENTISTRY Including Diseases of the Mouth By G Preiswerk M D Ph D Authorized Translation from the German Edited by C W Warren A M D D S Cloth Pp 343 Price $3 50 net Philadelphia W B Saunders Company 1906

Among the few translations of general dental text books Preiswerk's "Atlas of Dentistry" is a most meritorious contribution It is a credit to the author, but its value to the student is in the illustrations The colored productions (copies of Professor Arkovy's reduced in size and the author's own original ones) certainly should aid the student in making a diagnosis of many diseases and a solution of some of the many puzzling questions dominant in dental pathology The text, however is only a condensed review of subjects, which may be found in any American or English text book What the dental student needs is a text book of original research into the biologic studies of his specialty A broader knowledge of general medicine (which this work does not contain) is necessary for the rational treatment of diseases of the mouth, jaws and teeth Credit is due to the editor, Dr George W Warren, for the excellent translation

PRINCIPLES OF MICROSCOPY Being a Handbook to the Microscope By A E Wright F R S Hon F R C S I Cloth Pp 250 Price $0 50 New York The MacMillan Company 1907

It may be as well to state in so many words that this handsome book in no sense is a guide to microscopic methods, clinical or otherwise There are no directions here for fixing tissues, cutting sections, preparing smears, counting or staining various objects for microscopic study The book "addresses itself to those who desire to master the scientific principles of microscopy, even at the price of some intellectual effort" It is the microscope itself and the principles on which it is constructed that constitutes the theme of the distinguished author, whose name now is so familiar because of his discovery of opsonins and introduction of therapeutic inoculation No extended review will be attempted The work, which evidently is the result of much study over many years, is divided into two parts Part I deals with the object or stage picture, and Part II with the development of the magnified microscopic image Numerous experiments are outlined in order to help the reader understand the statements in the text There are many illustrations New technical terms have been coined as freely as seemed necessary to the author to make himself clear in order to avoid unnecessary circumlocution and mathematical formulæ "Mathematical signs as a substitute for speech can be defended only in the case of the inarticulate classes of the learned" The style is peculiarly characteristic of the author The subject matter is carefully arranged in logical sequence, and it will be a pleasure to those who really wish to learn something about the scientific principles of the microscope, and not remain content, as most do, following a system of rule of thumb, to study this book, for it is a book to understand which will require actual study and experimentation

PLASTER OF PARIS AND HOW TO USE IT Martin W Ware M D Instructor of Surgery in the New York Postgraduate School Cloth Pp 88 Price $1 00 New York Surgery Publishing Company, 1906

This little book gives in a comprehensive way the various uses of which plaster of Paris may be put by the surgeon The subject is clearly presented, and with the illustrations the book makes a useful manual of instruction Details are given in full, from the making of a bandage to its application. The mechanical work is well done and the book presents a very neat appearance

THE NEW HYGIENE Three Lectures on the Prevention of Infectious Diseases By Elie Metchnikoff with preface by E Ray Lankester Cloth Pp 104 Price $1 00 net. Chicago W T Keener & Co, 1906

These interesting lectures were delivered by Metchnikoff in London at the invitation of the Council of the Royal Institute of Public Health They will be read with interest by medical as well as non medical persons The first lecture deals with "The Hygiene of the Tissues" Here Metchnikoff discusses the means whereby the body rids itself of infectious microbes, with special emphasis on the rôle of the phagocytes It is quite entertaining to note the skill with which he puts to one side everything that in any way tends to lessen the importance of phagocytosis as developed by him and his school Even the opsonins are denied the rôle currently assigned to them in the mechanism of phagocytosis In the concluding part of the lecture he points out certain practical applications of our knowledge of the defenses against infection The second lecture deals with "The Hygiene of the Alimentary Canal" Probably the majority of medical men will take issue with Metchnikoff as to the importance of worms in causing appendicitis Certainly the surgeons have missed a great discovery if Metchnikoff's hypothesis on this point is found to have a basis in fact Be that as it may, the evidence, slight though it be, is presented with great skill and suggestiveness, followed with a plea for measures that may prevent contamination of our vegetables with the ova of worms In the third lecture, "Hygienic Measures Against Syphilis," the recent knowledge obtained from experimental syphilis in apes and monkeys is clearly set forth, especially from the point of view of preventive inoculation with attenuated virus The small chance for prophylactic treatment of syphilis by means of having vaccines ever becoming practical is acknowledged The various observations on the prophylactic inunctions of mercurial ointments immediately after suspicious contact, including the experimental work of Metchnikoff and Roux on apes and monkeys as well as man, are then recounted and the method tentatively recommended for practical use The possible objections of moralists to this plan, which, if found valuable might serve to encourage vice, are skilfully met. There is about these lectures a certain charm, already familiar to the readers of Metchnikoff's previous writings, that makes the reading pleasant and profitable even though one may be compelled to differ from some of the views presented The truly philanthropic spirit of the author makes itself felt on every page and the reader is impressed with the great value of scientific work in infectious diseases

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and methods of treatment for the diseases seen especially in every day practice Contributions will be welcomed from our readers]

Angina Pectoris

(Concluded from page 972)

Professor Lemoine, in *Le Nord Medical*, gives a brief résumé of things to be avoided in treating this condition In true angina pectoris, caused by ischemia of the heart in the course of arteriosclerosis, at the time of the attack heart tonics, such as digitalis, ergot, caffein, strophanthus, convallaria majalis, should not be given, these agents would only increase the arterial tension, which is already too high They should not be employed until the period of the disease occurs when the myocardium, attacked by sclerosis, is enfeebled, so that the cardiac fiber becomes inefficient Huchard is of the opinion that during the attack the usual nerve sedatives, such as antipyrin, potassium bromid, sulphonmethane, paraldehyd and chloral hydrate should not be used He also denies any therapeutic utility to belladonna and cocain in these cases Lemoine advises against using potassium iodid for too long a time, as the potassium salts act unfavorably on the heart structures After a brief period sodium iodid may be substituted for the potassium salt The benefits of general sedatives and hypnotics should not be refused to patients suffering with pseudo angina pectoris, when the pain is the most prominent symptom The underlying general condition which may cause the symptoms, such as gout or diabetes, must be treated The well established principle of revulsion (especially the ice bag and wet cups over the precordial region) must not be regarded as useless in cases of angina pectoris of infectious origin

Anders, in his "Practice of Medicine," also advocates the application of cold to the precordial region, and states that rarely hot applications (hot cloths or mustard plasters) may give better results He gives from 3 to 5 drops (0 18 to 0 30) of amyl nitrite by inhalation and states that if this does not give relief from the pain morphin, gr 1/3 (0 021) should be given hypodermically In cases in which the arterial tension is habitually exalted, Anders advises giving nitroglycerin, beginning with min 1 (0 06) and increasing the dose by min 1 (0 06) every five or six days, until the physiologic effects are produced He states that sodium nitrite may be employed similarly, the dose being gr 1 to 3 (0 06 to 0 18) three or four times a day When hypertrophy of the left ventricle is excessive the following combination, Anders says, is effective

℞	Tincturæ aconiti	m xlviii	3 10
	Sodii bromidi	℥ss	15
	Elix simplicis, q. s. ad.	℥iii	90

Ft mist Sig Four teaspoonfuls three times a day

This may be omitted at the end of every two weeks for two or three days

[It might be well to commence with a smaller dose of the aconite till the effect on the patient could be noted —ED]

Phenolphthalein as a Purgative

Phenolphthalein is a yellowish powder, very slightly soluble in water, readily soluble in alcohol and in aqueous solutions of hydroxids and carbonates It is colorless in acid solutions and red in alkaline liquids So far as our present knowledge goes, it produces no noticeable physiologic effect except that of a purgative When absorbed it is excreted in the urine unchanged in chemical character, but sometimes in combination so that its characteristic color with alkalies is only shown after the combination is broken up by heating with an acid It has long been in use by chemists and clinicians as an indicator of alkalinity in determining the acidity of gastric contents urine, etc.

Its introduction into therapeutics is more recent and has attracted comparatively little attention The discovery of its purgative properties is stated to have been due to its use in artificial Hungarian wines to prevent their substitution for the genuine wines It was noticed that when these cheap wines were "denatured" by the addition of phenolphthalein their use was regularly followed by diarrhea This led to the introduction of phenolphthalein as a proprietary remedy, and it has been advertised in Europe, especially in Great Britain, for the last five years under the name of purgen (see THE JOURNAL, Nov 8, 1902, page 1218, Jan 5, 1907, pages 64 and 70) Other trade names for phenolphthalein or substances containing it are Purgen konfect, paraphthalein, purgatol, purgotin, purgo, purglets, purgella, purgolade, purgylum, laxareonfect, laxine, and el zernae Phenolphthalein is also an active constituent of the proprietary probilin pills

As yet it has received little attention from pharmacologists, its medicinal use remaining unnoticed in the latest text books, even so extensive a work as the 'National Dispensatory" stating that it is not used in medicine

The investigations of Vamossy, Dornblüth, Tunnicliffe and others seem to show however that it is a safe cathartic, acting without pain, in from four to six hours and leaving less tendency to sluggishness of the bowels as an after effect than other cathartics From the evidence presented it would seem that phenolphthalein will be valuable in the treatment of habitual constipation

In Martindale and Westcott's "Extra Pharmacopeia" (British), page 24, it is stated that phenolphthalein is "useful where a prompt purgative is required as in jaundice," and further that it "does not irritate the kidneys"

The dose generally recommended varies from 0 06 gm (1 grain) to 0 30 gm (5 grains), but it must be borne in mind that certain individuals possess a marked idiosyncrasy to phenol compounds and that in such cases phenolphthalein should be prescribed with caution It may be given in the form of pills, capsules, tablets or powders Pharmaceutical manufacturers are beginning to put it up in tablets and in other forms for medical use, but of course any pharmacist can procure the drug and dispense it as prescribed

It may be prescribed as follows,

℞	Phenolphthalein	ʒi	4
	Div in capsulæ No xx		

Sig One capsule at bedtime when necessary

Powders may be ordered instead of capsules

It is a reflection on our means of diffusing information and on the readiness of physicians to apply new discoveries that our knowledge of a valuable remedy should depend on the propaganda of commercial interests Practical physicians who are looking for a new cathartic should try this substance under its own name and avoid its exploitation under fancy titles by commercial interests It is well to remember that this substance is a perfectly definite chemical compound which can be easily obtained

[Phenolphthalein belongs to a class of bodies known as Triphenyl methane-dyes to which also fuchsin eosin and fluorescein belong Triphenylmethane may be considered as derived from methane CH_4 by replacement of 3 hydrogen atoms by 3 phenyl groups thus $CH(C_6H_5)_3$. By replacement of the remaining hydrogen atom by hydroxyl OH and of one phenyl group by C_6H_4COOH an acid is obtained having the formula $C(OH)(C_6H_5)(C_6H_4COOH)$ which may be called hydroxy diphenyl phenylcarboxy methane This acid is unstable and by loss of water passes to a compound having the composition $C(C_6H_5)_2(C_6H_4COO)$ which is known as phthalophenone

Bodies of this kind are generally known as phthaleins and are obtained by the action of phenols on the anhydrid of phthalic acid $C_6H_4(COOH)$ so named because commonly made from naphthalene Thus phenolphthalein is obtained by the action of carbolic acid on phthalic acid anhydrid $C_6H_4(COO)(CO)$ Phenolphthalein differs that 2 hydroxyl groups have been introduced into the 2 phenyl radicles thus $C(C_6H_4OH)(C_6H_4COO)$ The nature of the change which occurs when phenolphthalein is turned red by alkalies is still a question It is quite possible that when treated with sodium hydroxid the red compound which is formed has the following composition $C(C_6H_4ONa)(C_6H_4O)(C_6H_4COONa)$]

Tar in Eczema

H Waldo (*British Med Jour* March 2 1907) says that it is almost unnecessary to mention that cleanliness of the eczematous surface should be carried out with weak alcohol or, if the eczema is very acute, with weak warm gruel instead of soap and water

When much thickening has occurred, and especially if fissures have formed, eczema rimosum, nothing is so satisfactory as local dressings of some reducing agent, as salicylic acid in various strengths In severe cases of eczema, and when an extensive surface is involved, the good effect of rest should be remembered, and the patient confined to bed

Although alcohol is valuable externally, it disagrees if given internally in eczema by dilating the peripheral vessels Waldo asserts that if an adult's eczema is receiving suitable treatment, to which it does not favorably respond, the abuse of alcohol should be suspected If the surface of an eczema does not show much redness, a weak preparation of alcohol and tar painted on once or twice in the twenty four hours, in addition to the ordinary application, at once relieves the itching and cures the eczema if the case selected is found to tolerate this interference

Crocker, "Diseases of the Skin," states that tar in some form is one of the most efficacious remedies in this condition, if used at the right stage of the disease As it requires much experience to know just when to apply it, Crocker advises trying it over a small area to see how it suits the case before extending its use to the entire surface, for, if wrongly used, it is almost as powerful for harm as for good. Tar acts best, according to Crocker, in the squamous and papular forms of eczema, as it relieves the intense irritation better than anything else It may be used in a mild form by adding a small quantity to the astringent ointments

Hebra, quoted by Crocker, recommends that the pure wood tar or the oil of cade be brushed firmly into an eczematous patch after thorough removal of the scales, and reapplied until a thick coat adheres This kind of treatment, Crocker states, is best suited to indolent patches, and the tar must be rubbed in vigorously If only a small area is involved the tar may be soaked off with strips of flannel soaked in olive oil If a limb or the whole body is involved the patient may soak the part affected in warm water for an hour or two Hebra allows the tar to remain till it separates spontaneously

Butler, "Text Book of Materia Medica," states that the tarry preparations are valuable antipruritics and of service in pruritus and various itching diseases of the skin, although their tendency to produce irritative and inflammatory effects when continuously and injudiciously applied should not be overlooked

The Alleged New Opium Cure

Within the past few weeks a number of articles have appeared in the secular press regarding a new cure for the opium habit, alleged to have been discovered in the Malay Peninsula Edward M Holmes, the curator of the Pharmaceutical Society of Great Britain, in a communication in the London *Times*, gives the species as *Combretum sundaicum*, Miquel, a woody climber growing abundantly in certain parts of the Malay Peninsula The medicinal properties of the natural order of plants to which it belongs, the *Combretaceæ* are not well known, though, according to Mr Holmes, some of the species have been used in malarial fevers, two are known to possess vermifuge properties and one is used in poisoning bats The few preliminary tests made with the small amount of material in the research laboratory of the Pharmaceutical Society so far have revealed only an astringent principle and a coloring matter The tests give no definite proof of the presence of any alkaloid or glucoside, although the leaves appear, Mr Holmes says, to contain some substance as yet unknown to chemists From missionary reports it would appear that the plant has been used with much faith, which must be based on some apparent success, but details of how it acts in destroying the appetite for opium have not been given and sufficient time has hardly elapsed to test the permanence of the cures According to the accounts, the leaves seem to be the efficient part of the plant. The opium question is a most important one here as well as in the East and if this new drug successfully meets the test of experience and has its value confirmed by chemical and physiologic tests, it will be a valuable addition to materia medica

Alteratives for Children.

Dr *Herman B Sheffield*, New York, states that arsenic, iodin and mercury are the leading remedies of this group Arsenic is best given as Fowler's solution in plain water Syrup of the iodid of iron with simple syrup forms a palatable and useful hematinic and alterative for children Sodium and potassium iodid may be prescribed in peppermint or orange water with a little simple syrup, or in compound syrup of sarsaparilla, or elixir of taraxacum Calome, the practitioner's panacea, is readily taken by children in powder form with a pinch of sugar

Cod liver oil, the almost indispensable tissue builder in all wasting diseases of childhood, is the stumbling block, Sheffield asserts, of the pharmaceutical reformer Cod liver oil always tastes of the oil so long as there is any in the mixture In the case of infants it is advisable to try giving cod liver oil by inunction The majority of children can be persuaded to like the following emulsion

℞	Olei morrhuæ	f ℥iv	120
	Extracti malti		
	Syrupi calcii hypophos, (N F) āā	f ℥i	30
	Glycerini		
	Pulveris acaciæ, āā	℥ss	15
	Aquæ cinnamomi, q s ad	f ℥viii	240

Antipyretics and Antirheumatics

The same authority declares that the best antipyretic for children is water internally and externally If the coal tar derivatives and salicylates are indicated they may be administered in powder form triturated with sugar to which a minute quantity of essence of peppermint may be added as flavoring When prescribing sodium salicylate in solution its nauseating sweet taste may be disguised by a drop or two of the tincture of nux vomica

Medicolegal

Embolism and Cause of Death—Province of Jury

The Second Appellate Division of the Supreme Court of New York says in the case of Kelly vs Wills, that an employé of the defendant fell 15 or 20 feet, building stones and mortar tubs falling on him He was taken to a hospital at once, and examination showed that his left leg was broken in two places, his right ankle was partially fractured and dislocated, and he was bruised about the body, especially on the left side thereof He remained in the hospital about twenty six days, when he suddenly died The physician who had charge of the case in the course of his regular attendance at the hospital for the last fifteen or sixteen days testified that he died of embolism Another physician, of great experience in ascertaining the cause of death, in answer to a hypothetical question, said that in his opinion the cause of death could not be told, but that it was a mere matter of conjecture, without an autopsy Four or five other physicians testified to something of the same effect Under these circumstances the court says that, if it was the duty of the jury to determine the exact and definite cause of death with the scientific certainty of a physician, and if the jury were to decide that question solely on the medical testimony it was quite true that the question was in much doubt But the question of cause was for the jury, who were neither required to find that cause beyond a reasonable doubt, nor to find specific affliction of the heart with the certainty of medical determination who were not bound to base their verdict on the medical testimony and who were at liberty to disregard the opinions of the experts called by either side And on the evidence and in the absence of proof of any intervening efficient cause the court thinks that there was sufficient evidence to sustain the verdict which was that the injury was the cause of the death They may have rejected the testimony of the defendant's experts or they may have concluded that it was very true from their testimony and that of the other physicians that an autopsy was the only certain method of determining the exact cause of death but they were not bound to be certain or to establish a certain medical opinion, of the exact cause of the death

Charity Hospital not Liable for Negligence—Principles Stated in Hot Water Bottle Case Against College Hospital.

The Kansas City Court of Appeals says, in the case of Adams vs University Hospital, in which it has denied a rehearing, that the plaintiff was a patient at the defendant's hospital, whither he had gone to have a surgical operation performed on him While yet under the influence of an anesthetic administered for the purpose of the operation and after the performance of the operation, he was placed in the care of one or more of the defendant's nurses who, it was charged, were not competent, and by reason thereof they permitted him to be severely burned on the legs by rubber bottles filled with hot water, whereby he was painfully and permanently injured The defendant contended that it was a benevolent or charitable institution and as such was not liable to an action for damages caused by the acts of its employés, that, as such an institution, it was exempt from application of the doctrine of respondeat superior (the master must answer)

Now, if the defendant's liability was to be ascribed to the negligence of its nurses, the manner of the injury was such, the court says, as to authorize the rule of res ipsa loquitur (the matter speaks for itself) to be invoked And if such liability was to be based on the negligence of the defendant in selecting competent nurses that rule would also apply For, in either case, the injury was, of itself, a sufficient showing, unexplained, that it resulted from one or the other of these sources of negligence and the court can see no reason why the defendant (if liable at all) should not be held to be obliged to exculpate itself by showing, in the latter instant, that it had used proper care in the selection of its nurses, as it would in the former by showing that the nurses had *not themselves* been negligent

The question as presented here related to the liability of a private, or quasi private, charity for damages caused by the negligent acts of its employés, or by its own negligent act in employing incompetent employés The court assumes that the evidence tended to show that the plaintiff was injured either by the negligence of one of the defendant's nurses or by her incompetence. If by the latter, the court assumes, for the purpose of disposing of the case, that there was enough in the record to justify a verdict that the defendant was careless in selecting her But as, in the court's opinion, the defendant was neither liable for the negligence of one of its employés, nor for its own negligence in selecting an incompetent employé, it could make no difference which of the two acts caused the injury

Every member of the public, the court goes on to say, is interested in the building up and maintenance of a charitable institution designed for the alleviation of human suffering, and every one may be supposed to be concerned in such institution, and to be a party to a line of action or conduct which would disable every other from doing anything which has a tendency to prevent the institution from performing the functions intended by its founder The state itself is concerned that its citizens may be restored to health, and to that end may have places always open where those in need may obtain relief So it may be said that any citizen who accepts the service of such institution (it making no difference whether in any special instance he pays his way) does so on the ground, or the implied assurance, that he will assert no complaint which has for its object, or perhaps the court should say, for its result, a total or partial destruction of the institution itself.

If an organization for charitable purposes founded on the bounty of others who supply funds for the purpose of administering relief to those in need of relief, and of extending aid, care and protection to those who have no one to call on by the ties of Nature, may have its funds diverted from such kindly purpose would it not inevitably operate to close the purses of the generous and benevolent who now do much to relieve the suffering of mankind? Let us see what the practical result might be With a view to supplying care, protection and education to dependent children without parents, some good man puts in trust for building an orphans' home the sum of $25 000, and for its perpetual maintenance the further sum of $100,000, to be put at interest or otherwise invested The trustees may unfortunately, without proper inquiry or care, employ an incompetent servant That servant, in the first year's existence of the home may, from ignorance, or from negligence, do, or omit to do, something causing damage which, under our liberal measure of compensation for personal injuries, would be sufficient to take up the whole fund, and thus, for a single mishap, the generous object of the donor would be thwarted, and what was intended as perpetual relief to succeeding generations of helpless children would be wiped out That funds supporting organizations for charity can not be thus diverted, in other words, that charitable institutions or corporations are not liable for the negligence of an employé, nor for the want of care in the selection of an employé, is sustained by authority and by reason

The question arose in England, and was decided in the House of Lords Heriot's Hospital vs Ross 12 Clark & F 507 In that case Heriot a jeweler, by his will, in the year 1623 left a large part of his estate to certain officers of the city of Edinburgh in perpetuity for founding and maintaining a hospital for the 'maintenance, relief, bringing up and education of so many poor fatherless boys, freemens sons of that town, as the means which I give and the yearly value of the lands so purchased shall amount and come unto' The hospital was to be governed by rules formulated by a certain doctor named in the will The rules, as framed, admitted no

the fund whereby those benefits are secured. To permit it to be done would be not only setting aside the purpose of the donor, but would, in its results, allow the claim of one person to exclude the rights of all others who may come after him It would be a matter of grave concern and regret if funds set apart for support of our charitable institutions should be made subject to the assaults of the damage claimant, and be called on, not only for compensatory recompense, but to stand for punishment in the way of exemplary damages Especially would it strike one as unfortunate, when it is realized that such claimant has his primary right to hold to the strictest accountability the individual who does him the injury for which he makes complaint, and that in denying him the right to impoverish benevolence we do not deny him a remedy against the actual wrongdoer So the weight of authority in this country supports Heriot's Hospital vs Ross as being the rule which commends itself, not only because it carried out the donor's intention, but because it is more reasonable and just, and better subserves an enlightened public policy Parks vs University, 218 Ill 381, Fire Ins Patrol vs Boyd, 120 Pa 624, Williamson vs Louisville Reform School, 95 Ky 251, Perry vs House of Refuge, 63 Md 20, Maia vs Eastern Hospital, 97 Va 507, Downes vs Harper Hospital, 101 Mich 555, McDonald vs Hospital, 120 Mass 432, Benton vs Trustees, 140 Mass 13

This court has found but one case, Glavin vs Rhode Island Hospital, 12 R I 411, which takes ground against the view here endeavored to be set forth, and that does not do so in such pronounced way as has been said It is there conceded (page 428 of 12 R I) that only the income of the institution could be held But whatever breadth the case may be thought to have, it is learned from Parks vs University, above cited, that the legislature of the state of Rhode Island has since nullified the effect of the decision In the two cases last cited from the Supreme Court of Massachusetts that court, while upholding the doctrine as stated by this court, yet makes use of language in the opinions which leaves room for an inference that a liability might attach if the corporation had been negligent in selecting its surgeons in the one case and its superintendent in the other The case of Hearns vs Waterbury Hospital, 66 Conn 98, 123 127, seems to concede that there would be a liability for the negligence of the employés themselves, if selected with due care But it is manifest that, if this court should uphold a rule which would make an institution of charity liable to a patient who has been injured by an incompetent servant, negligently selected, it would destroy the principle it has endeavored to make plain, that charitable trust funds can not be diverted from the purposes of the donor For it can make no difference, so far as the integrity of the fund is concerned, whether it be sought after by one who is injured by the negligence of a servant, or the negligent selection of such servant

There are authorities which very properly hold that, where ship companies keep a physician on board (even though required to do so by law) to serve those who may choose to call him, he is not to be regarded as the company's servant, since his mode and manner of service is not under the control of the company And that physicians and nurses which may be provided by railway companies at their hospitals, or the hospitals of employés, are not, for the same reason, the servants of the railroad They are not charities, but are nothing more nor less than business associations formed for business purposes But cases of that class do not reach the question here involved For decisive considerations which arise in the one are not found in the other

The hospital defendant in this case was established under a statute providing for the organization of benevolent, religious, scientific etc associations Its charter provides that "the object of this association shall be to conduct and control the institution known as the 'University Hospital,' now owned and controlled by the University Medical College of Kansas City to provide medical treatment free of charge for the poor and to train and educate professional nurses, and to confer on them a degree" There was no stock, nor dividends, and everything realized from an income by payments from paying patients went to the improvement of the hospital and the maintenance of an equipment Surgeons and physicians made no charge, and people who could not pay, even for board, were, by the rules, to be received free Other places known as free institutions were furnished by the defendant with physicians, nurses and medicines gratuitously It was true that a large body of the patients seeking relief with the defendant paid their way, some more and some less, and that the plaintiff himself was a "pay patient" But that circumstance amounted to no more than a contribution by such persons to the support of the institution The authorities are that such circumstance does not alter the character of the institution Downes vs Harper Hospital, 101 Mich 555, Parks vs University, 218 Ill. 381, McDonald vs Hospital, 120 Mass 432

Wherefore the court holds that the defendant hospital was not liable in this action, but that the plaintiff's remedy was against those who may have inflicted the injury on him, though, if it were not a charity hospital, it would be liable to this action though such institutions were exempt

Employés Should Give Notice of Lack of Strength.

The Court of Civil Appeals of Texas says, on the appeal of Galveston, Houston & San Antonio Railway Company vs Bonn, a personal injury case brought by the latter party, that the jury was instructed that when a man undertakes employment and service with another, his employer has the right to assume that he is physically able to do the work which he udertakes to do, and, if he suffers from any weakness or infirmity which renders him unfit to perform the labor, then it is his duty to disclose this to his employer If the work changes, and if he goes under the command of another foreman who does not known of the disabilities, if any, and that foreman directs him to do different and heavier work which may probably cause injury to him, it is his duty to inform that foreman of his disabilities, if any Applying this rule of law to the facts in the case, if the plaintiff was, at the time he attempted to carry the rail in question, in a physical condition which made him susceptible to injury from carrying the ordinary burdens which men of his appearance could sustain with reasonable safety, and such physical condition, if any, was unknown to the foreman, the foreman had the right to assume that he could with safety bear such a burden In harmony with this the court holds that, if the plaintiff was afflicted so as to make it extra hazardous for one in his condition to engage in lifting weights, engaging in it without notifying his foreman of his condition, would bring his conduct under the head of contributory negligence which was embraced in the charge

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Medical Record, New York.

March 16

1 *Ocular Lesions of General Arteriosclerosis W B Marple New York
2 *Radical Mastoid Operation for Cure of Chronic Suppuration of Middle Ear S Oppenheimer New York
3 *Abortive Treatment of Pneumonia G L Curtis New York.
4 *Primary Carcinoma of Inferior Turbinate W W Carter New York
5 *Embolism J N Study Cambridge City Ind
6 *Inoperable Round Celled Sarcoma of Ovary H C Coe and W B Coley New York

1 Ocular Lesions of Arteriosclerosis.—According to Marple, there may be a general change in the size of the arteries and veins of the eye grounds in the color of the arteries and in the caliber of the vessels (this is the most characteristic phenomenon)

2 Radical Mastoid Operation.—Oppenheimer believes that in the selection of cases for operation a large experience rather than rigid rules constitutes the best safeguard against

the risk of delay or of performing an unnecessary operation The most important object of the operation is the thorough removal of all diseased tissue, and second to this, is the securing of free and permanent drainage He considers the operation absolutely contraindicated in advanced cases of pulmonary tuberculosis and in cases of serious organic diseases

3 **Abortive Treatment of Pneumonia**—Curtis finds ozonation an ideal remedy for all stages and degrees of congestion, although in treating pneumonia, he does not rely on any single remedy He has employed ozonation in 69 cases, covering all degrees of severity and all stages of the disease with complete recovery in every instance He claims to have demonstrated repeatedly that by the proper application of ozonation, pneumonia can be aborted at any stage, resolution becoming established within 48 hours from the beginning of treatment This should be applied from half an hour to two hours at a time, and repeated several times daily, according to the severity of the case, but never so frequently as to interfere with a proper amount of sleep It should be applied over the head, spine and abdomen, as well as over the congested area

The apparatus employed consists practically of an ozone generator fed by a high tension coil which multiplies the voltage of the commercial current a million or more times and practically eliminates all amperage To the generator are attached brushes or corrugated wires from which ozone is given off in large quantities, and also connected with it, by means of a wire cord, is a vacuum tube through which ozone is forced into and through the body, thereby oxidizing all pathogenic products and re establishing nutrition and vitality Connected with this apparatus is an electric cabinet which generates light and heat coupled with ozone

4 **Primary Carcinoma of Inferior Turbinate**—Carter reports *a case of primary carcinoma of the inferior turbinate*, occurring in a woman, 38 years of age The diagnosis was confirmed microscopically The tumor, a typical columnar celled epithelioma, was of five months' standing The growth, and all the surrounding tissues in the superior maxilla were removed, and at the present, three months after the operation, there is no recurrence

5 **Embolism**—Study reports two cases of embolism, one of the pulmonary artery, following a comparatively trivial pelvic trouble, which terminated fatally The second case was one of embolism of the lung, following fracture of the leg It manifested itself on the twenty first day after the injury and terminated in recovery

6 **Sarcoma of Ovary**—Coe and Coley report a case of inoperable round celled sarcoma of the ovary occurring in a woman, 32 years of age, in which treatment by the mixed toxins of erysipelas and Bacillus prodigiosus, combined later with operation, was successful, that is, the patient was restored to health for nearly two years, when she contracted pneumonia and died within a few days In a closing note the authors state that from a recent letter received by them there seems a possibility that there was metastasis in the lung instead of a typical pneumonia

New York Medical Journal

March 16

7 *Limitations of Surgical Treatment of Uterine Fibroids H C Coe New York
8 *General Infection by Colon Bacillus with Rapidly Fatal Septicemia and Fatal Hemoglobinemia A D Blackader and B D Gillies Montreal
9 Trachoma Clinically and Socially Considered H F Hansell Philadelphia
10 Pathology and Symptomatology of Chronic Adhesive Pericarditis M H Sicard New York
11 *Rhinoscleroma Treated with Roentgen Ray M J Ballin New York
12 *Spondylitis Deformans P Le Breton Buffalo
13 *Significance of Bladder Symptoms in Relation to Some Spinal Cord Lesions J B Squier New York
14 *Gonorrheal Joint Disease and Its Treatment I W Nathan New York

7 **Limitations of Surgical Treatment of Uterine Fibroid**—Coe urges that the general practitioner should be sure that the patient has a tumor before he informs her of the fact or advises an operation He says that the whole question of uterine fibroid turns on the proper recognition of the variety, site and symptoms caused by the tumor and not on the mere presence of a growth Furthermore, the safety of a surgical procedure does not justify its performance in a case in which the indications are not clear and well defined

8 **Fatal General Infection by Colon Bacillus**—Blackader and Gillies report a case of general infection occurring in a young woman, 27 years old, which supervened suddenly, while the patient was in fair health and spirits and proceeded to a fatal termination in 48 hours The patient was seized with severe abdominal pain, nausea and vomiting, associated with uterine hemorrhage evidently the result of the taking of abortifacients Cultures from the blood gave a pure culture of the *Bacillus coli communis* It is evident, say the authors, that the abortion was followed by a colon bacillus infection of the uterus and that this infection became general There was an extreme amount of hemolysis which adds to the interest in the case

11 **Roentgen Ray in Rhinoscleroma**—Ballin reports a case of rhinoscleroma in which the treatment was limited to the use of the Roentgen ray the result being a most satisfactory one All the tumefied masses disappeared, although nasal respiration is not yet restored Interesting features in this case are its long duration 16 years the complete freedom from the disease of the larynx, the large size of the nose, and the failure of all other forms of treatment to give any relief

12 **Spondylitis Deformans**—Seven cases of spondylitis deformans are reported by Le Breton in two of which the cause of the spinal condition was probably the toxins of tuberculosis

13 **Significance of Bladder Symptoms in Relation to Spinal Cord Lesions**—Squier emphasizes the necessity for a closer discrimination between urinary symptoms arising from degenerative changes in the motor or sensory center in the cord and those due wholly to organic conditions in the bladder and its adnexa Four cases in point are cited In one case, a diagnosis of locomotor ataxia had been made Squier did a suprapubic cystotomy and removed two calculi No further symptoms of the tabes were manifested In a second case similar to the first, 11 stones were removed from the bladder In the remaining two cases there was definite spinal disease, but the urinary disturbances did not originate in the cord lesion

14 **Gonorrheal Joint Disease**—According to Nathan, proper mechanical or operative treatment of gonorrheal joint disease will nearly always succeed when all other methods have failed to give relief Even in the more acute cases he has rarely found it necessary to resort to narcotics

Boston Medical and Surgical Journal

March 15

15 *Tuberculous Scleritis a Commonly Unrecognized Form of Tuberculosis I H Verhoeff Boston
16 Studies in Psychopathology B Sidis Brookline Mass
17 Relative Value of Massage Exercises and Baths in Treatment of Heart Affections D Graham Boston
18 Pulse-Pressure Estimation J J Putnam Boston
19 Studies in Psychopathology B Sidis Brookline Mass Boston
20 Ocular and General Symptoms in Nasal Obstruction H C Parker Boston

15 **Tuberculous Scleritis**—Verhoeff reports 13 cases of tuberculous scleritis all of which were tested with tuberculin 11 of the patients were admitted to the hospital for this purpose A positive general reaction was obtained in all cases, and a local reaction in the eye in 9 All of the patients were females the youngest was 11 and the oldest 46 years old The scleritis was active in one eye only but in three cases there were corneal opacities in the other eye With only one exception the patients were well nourished and apparently in good health aside from the ocular trouble At least three of the patients several times showed exacerbations during menstrual period All the patients were

treated with tuberculin, and the results of treatment have convinced Verhoeff that tuberculous sclerits may be regarded as a disease amenable to treatment He says that there is no class of cases in which the use of tuberculin is more strongly indicated He used the old tuberculin

Lancet-Clinic, Cincinnati.

March 16

21 *Intestinal Obstruction H O Walker, Detroit
22 Cancer What Can Be Done for It. J W Carpenter Cincinnati
23 Curettage Indications Technic and Complications J Miller, Cincinnati
24 Tinea Sycosis J V Shoemaker Philadelphia.

21 See abstract in THE JOURNAL, Nov 24, 1906, page 1761

St. Louis Medical Review

March 9

25 Heart Block F C Fahlen, St. Louis
26 Physiology of the Heart. D P Lyon St. Louis
27 Anatomy and Pathology of Heart Block. H D Senior St. Louis.

Surgery, Gynecology and Obstetrics, Chicago

February

28 *Ectopia Testis Transversa. A D Halstead Chicago
29 *Treatment of Hip Disease J L. Porter Chicago
30 *Perforation of Gastric Ulcer W Hessert Chicago
31 *Rupture of Abdominal Wall C Kahlke Chicago
32 *Secondary Sarcoma. G A Dowling Chicago
33 *Multiple Aneurisms of Large Vessels C E Yerger Chicago
34 *Operative Treatment of Wounds of the Diaphragm E W Andrews Chicago
35 Recent Progress in Surgery of the Conjunctival Sac. W E Gamble Chicago
36 *Uterine Prolapse F H Martin Chicago
37 *Terminations and Treatment of Extrauterine Pregnancy A. P Heineck, Chicago
38 Gunshot Wounds of the Cranium C Adams Chicago
39 Pyelonephritis of Pregnancy C B Reed Chicago
40 *Tuberculous Peritonitis in the Female A Bybee Chicago
41 *Abdominal Gunshot Wounds. L C Riebel Chicago
42 Surgery of the Abdomen F W Andrews Chicago
43 Primary Field Dressings. P J H Farrell Chicago
44 Gunshot Wounds of the Neck. T J Sullivan, Chicago

28 **Ectopia Testis Transversa.**—In the case reported by Halstead, both testicles were found to occupy the left scrotal pouch—both having a common tunica vaginalis The epididymes diffused from the middle third downward to the globus minor The patient, aged 42, applied for relief from an irreducible inguinal hernia As there was nothing to justify the removal of the testicles, they were replaced in the scrotal pouch and the hernia operation completed without transplanting the cord

29 **Treatment of Hip Disease**—Porter discusses more particularly the correction of late deformities incident to hip-joint disease by means of an apparatus devised by him and which is a modification of the original Bartlett machine The procedure is described in full Porter claims to have had excellent results from the use of this apparatus

30 **Perforation of Gastric Ulcer**—Hessert reports two cases in which an operation was done, both patients recovering In one case, the perforation was closed by through and through sutures of silk, and over this a roll of Lembert sutures In the other case, which simulated a carcinoma and in which such a diagnosis was made but changed after the operation, a typical posterior gastroenterostomy was made six months after the perforation had been closed by sutures as in the first case

31 **Rupture of Abdominal Wall**—Two cases are reported by Kahlke In one of them a rupture occurred in the upper right quadrant of the abdomen as the result of a fall from a third story window Under suitable treatment the patient recovered The second patient was run over by a milk wagon, but no serious disturbance manifested itself until about eleven weeks after the injury occurred The patient then noticed a lump about the size of a hen's egg near McBurney's point Two weeks later the swelling ruptured and some pus was discharged The mass consisted of suppurating omentum The hernia had evidently occurred as the result of a partial rupture of the aponeuroses of the external oblique and a localized rupture of the muscular portion of the internal oblique and transversalis muscles There was no sac. This patient also recovered

32 **Secondary Sarcoma.**—Dowling reports a case of sarcomata of the lungs and pleuræ secondary to sarcoma of the tibia.

33 **Multiple Aneurisms of Large Vessels**—Among 85 cases of aneurism of the heart and aorta, or other large vessels seen in the postmortem room of Cook County Hospital, 8 cases were found in which the aneurisms were multiple Yerger adds one case recently observed by him in which he found three sacculated aneurisms of the arch of the aorta and of the abdominal aorta

34 **Wounds of Diaphragm**—Andrews reports two cases One was a case of diaphragmatic hernia brought about by a blow on the abdomen, which terminated quickly in death The second case was one of recovery by operation from a stab wound of the lung, diaphragm and stomach In this case it was difficult to suture the diaphragm, and the expedient was adopted of making a transpleural exclusion by one or two deep loop or mattress stitches which extended through the intercostal space, across into the peritoneum and through the diaphragm In this way the thin edge of the pleural cavity, as well as the two wounds, were occluded, the lung having receded The rushing of air at once ceased when the stitches were tied.

36 **Uterine Prolapse**—Martin reviews the surgical treatment of uterine prolapse and describes an operation devised by him in which he utilizes the ligaments of the uterus in supporting the upper diaphragm The operation is said to be applicable to women, who have passed the child bearing period, and in whom there is no objection to the removal of the uterus

37 **Extrauterine Pregnancy**—Heineck presents a very complete summary of the clinical history of extrauterine pregnancy, and embodies a report of 32 cases, seen at Cook County Hospital In this series there was only one death In this case the abdomino vaginal route was employed The abdominal route was employed in 30 cases, and the vaginal route in one case All these cases terminated favorably Signs of pregnancy were noted in about half the cases The youngest patient was 18 years old, the oldest was 42 Fifteen cases occurred between the ages of 20 and 30 Pain in the lower abdominal region, menstrual irregularities and a palpable mass in one or the other fornix or in both fornices, were present, respectively in 30, 28 and 31 cases Heineck believes that these three symptoms are highly suggestive of ectopic gestation

40 **Tuberculous Peritonitis**—Of 30 cases of tuberculous peritonitis collected by Bybee from the postmortem records of Cook County Hospital, 28 were in the male and 2 in the female. He concludes that peritoneal tuberculosis is from two to four times as frequent in the male as in the female, that the genital tract of the female is not a factor in the etiology of peritoneal tuberculosis, and that the genital tract of the female furnishes a degree of immunity to peritoneal tuberculosis above that of the male

41 **Abdominal Gunshot Wound**—Riebel analyzes 28 cases of gunshot wounds of the abdomen, the history of each case being given in full

Annals of Surgery, Philadelphia

February

45 *Sequestration Anemia in Brain and Skull Surgery R H M Dawbarn New York
46 *Papillary Cystadenomata of Breast. R B Greenough Boston and C C Simmons Cambridge Mass
47 *Puerperal General Peritonitis F McDonald New York
48 *Subacute Perforation of Stomach and Duodenum B G H Moynihan Leeds England
49 *Large Number of Foreign Bodies in Stomach A F Benjamin Minneapolis
50 *Sarcoma of Small Intestine and Mesentery G Barling Birmingham England
51 *Congenital Lumbar Hernia at Triangle of Petit C N Dowd New York
52 *Tuberculosis of the Bladder G Walker Baltimore
53 *Recurrent Intermittent Retention of Urine Occurring with the Remissions in Pernicious Anemia J H Cunningham, Jr Boston
54 *Arthroplasty on the Elbow Joint C L Scudder, Boston

45 Sequestration Anemia in Brain Surgery.—Dawbarn claims that with entire safety one can withdraw into the limbs some quarts of blood, that is, sequestrate before operation and retain in the limbs by cordage enough fluid to make a striking difference in loss of blood from the field of operation, enough, as Dawbarn has convinced himself, to constitute in many cases the difference between life and death, between shock and absence of shock, in a gravely severe case This temporary bleeding is controlled as to degree by the finger on the pulse The sequestration proceeds until there is plainly noticeable softening and lessening of tension At this point begins the operation, and every cut vessel spurts less than otherwise would be the case A towel folded lengthwise is wrapped about each thigh very close to the trunk and on this the rubber tube is tightened After from five to ten minutes the softened pulse will indicate that the operation may be proceeded with The congested limbs are, however, first warmly wrapped up and hot water bags placed about them Only in case the limbs are excessively swollen, or the pulse demands a change, is the tension altered during the operation Dawbarn reports five cases of brain and skull surgery in which this method was employed with the greatest satisfaction Less of the anesthetic is needed, hemorrhage during the operation is controlled easily, and, as stated before, there is lessened danger of sudden death No mean advantage is the greater space obtained between brain and brain case, thus lessening the risk of laceration of the brain surface.

46 Papillary Cystadenomata of the Breast.—Greenough and Simmons analyze 20 recorded cases of papillary cystadenomata of fibro-epithelial tumors of the breast

47 Puerperal General Peritonitis.—McDonald reports 11 cases in which the streptococcus was the infecting organism alone in 3 and associated with other bacilli in 3 cases The *Staphylococcus aureus* alone was the infecting organism in 2 cases, the pneumococcus in one case, and the gonococcus alone in one case and associated in one case.

48 Subacute Perforation of Stomach and Duodenum.—Moynihan has operated on 15 patients, on 5 during the early stage, on 10 after the lapse of months or years In 4 cases an hour glass stomach was found A correct diagnosis was made and without difficulty in every case Moynihan says that if the patient is seen at the time of the onset of perforation, there need be no hesitation in advising instant operation All the cases are reported in full

49 Foreign Bodies in Stomach.—Benjamin reports the case of a professional glass and nail eater who had followed this vocation for twenty years without any mishap While walking on the street he was taken suddenly with severe pain across the stomach and in the region of the heart. He vomited considerable matter of a black color, which tasted like iron rust The stools were also black in color There was a feeling of weight in the stomach, pain on breathing, and a sensation of some object in the stomach Fifty two 6, 8, 10, and 20 penny nails were removed from the sacculated cardiac end of the stomach They were in various stages of erosion, two being like darning needles The walls of the stomach were hypertrophied and fibrous and showed scars of healed ulcers The stomach was greatly dilated The patient left the hospital on the ninth day feeling perfectly well, and has remained so

50 Sarcoma of Small Intestine.—A case of round celled sarcoma of the small intestine is reported by Barling The patient was a boy, six years of age Six feet and five inches of the small intestine were removed close to the ileocecal valve, and an ileocolic anastomosis was made. The patient made an uneventful recovery

51 Congenital Lumbar Hernia.—Dowd reports a case of this kind which was first noted when the patient was three and one half years old The hernia was about the size of a goose egg and bulged in a marked way on coughing or on exertion The triangle of Petit was greatly enlarged The sac of the hernia was distinct Its contents consisted of colon and appendix There was no recurrence of the hernia after eight months

52 Tuberculosis of Bladder.—In the preparation of this paper Walker studied 447 cases of tuberculosis of the bladder collected from the literature and elsewhere His conclusions are to appear in a subsequent paper

53 Recurrent Intermittent Retention of Urine.—The interest in Cunningham's case is the recurrent intermittent retention of urine dependent on remissions or exacerbations of anemia in the course of a pernicious anemia The case also illustrates the value of the Bottini operation in affording relief to prostatic obstruction by incising the obstructing portion of the gland in a class of cases which will not stand a general anesthesia or the shock and convalescence attending prostatectomy

54 Arthroplasty on Elbow Joint.—One year and four months following the operation in the case reported by Scudder, the man had a strong and useful arm with which he is able to do all the work about a small farm There is *no pain and no discomfort and only a small amount of limitation* of motion A rectangular skin flap taken from the posterior surface of the upper arm was swung into the joint and placed between the ends of the exposed bones The flap covered the lower end of the humerus and sigmoid cavity of the ulna and the upper end of the radius The wound was not drained Gentle passive motion was given at the end of about ten days

Wisconsin Medical Journal, Milwaukee

February

55 *Nervous and Mental Diseases in General Practice R Dewey Wauwatosa Wis.
56 *Open air Treatment of Pneumonia A J Patek Milwaukee
57 Those Who May Be Classed as Feeble Minded A W Williamarth Chippewa Falls
58 *Endometritis J M Evans Evansville Ind
59 Membranous Colitis Mucus or Mucomembranous Colitis and Desquamating Colo-proctitis L Hopkinson Milwaukee

55.—See abstract in THE JOURNAL, July 14, 1906, page 145

56 Open Air Treatment of Pneumonia.—This treatment of pneumonia in children is endorsed fully by Patek, and he reports three cases in which it was employed successfully

58.—See abstract in THE JOURNAL, July 14, 1906, page 144

Pennsylvania Medical Journal, Athens

February

60 *Laryngology I J Dunn Erie
61 Electricity in Treatment of Disease. J V Shoemaker, Philadelphia.
62 *High Frequency Current in Pulmonary Tuberculosis M I Barshinger York.
63 *High Frequency Currents in Chronic Rheumatism and Rheumatoid Arthritis G E Pfahler Philadelphia
64 *Intranasal Conditions as Bearing on the Etiology of Diseases of the Ear G Hudson Makuen, Philadelphia
65 *Plea for Creation of a State Hospital for Inebriates and Drug Habitués. T Diller Pittsburg
66 *Internal Use of Saline Solution in Fever J M Taylor Philadelphia
67 Hepatic Insufficiency W H Glynn Pittsburg
68 Subperitoneal Myxo-Sarcoma Simulating a Sciatic Hernia N G L Shillito Allegheny
69 Five Interesting Neurologic Cases T Diller Pittsburg

60.—See THE JOURNAL, Oct 6, 1906, page 1131

62 High-Frequency Current in Tuberculosis.—As the result of careful observation of the effects produced by the treatment of four cases of pulmonary tuberculosis with the high frequency current, Barshinger is of the opinion that the current stimulates, increases and maintains the metabolism of the body, securing a reversal of the progressively lowered metabolism which takes place in tuberculosis The pulmonary circulation is also improved, and thus the congestion and inflammation in the lung tissues are relieved Barshinger advises, however that careful attention must be given to the diet and hygiene of the patient He reports in great detail the clinical entity of one of his patients and refers briefly to three other cases

63 High Frequency Currents in Rheumatism.—Pfahler says that in chronic rheumatism the [illegible] treatments [illegible]

relief from the pain and stiffness in the joints, increase metabolism and improve the circulation of the part, thus helping to remove the exudate and to restore function Brief mention is made of an illustrative case

64 —See abstract in THE JOURNAL, Oct 6, 1906, page 1132

65 —See abstract in THE JOURNAL, Sept, 29, 1906, page 1048

66 —See abstract in THE JOURNAL, Nov 10, 1906, page 1551

Archives of Pediatrics, New York.
February

70 *Importance of the Estimation of Caloric Value of Infant Food J J Thomas, Cleveland
71 *Determination of the Caloric Value of Modified Milk G W Moorehouse, Cleveland
72 *Impaired Resonance Behind and Beneath the Inner Third of the Left Clavicle in Normal Children S McC Hamill Philadelphia
73 Significance of Albumin and Casts in the Urine in Children I E Sondern New York
74 *Scarlet Fever or Fourth Disease (Filatow Dukes) Which? H Illoway New York
75 Acute Alcoholism in Children S W Moorhead Philadelphia
76 *Treatment of Whooping Cough by Abdominal Belt. T W Kilmer, New York

70 Estimation of Caloric Value of Infant Food.—Thomas says that the estimation of the food requirement of the infant and the caloric value of infant foods is of the highest importance, not only for the purpose of establishing infant feeding on a scientific basis, but also to guard against over feeding

71 Id.—Moorhouse describes a method for determining the caloric values of milk mixtures which he has employed successfully

72 Impaired Pulmonary Resonance in Normal Children.—Hamill maintains that there exists in the chests of the majority of infants and children in perfect health impaired resonance behind and beneath the inner third of the left clavicle, and that this persists throughout childhood It can be elicited by percussion of the clavicle and by percussion in the first interspace immediately beneath the clavicle, the child being in the recumbent position, although sometimes the findings are more distinct when the child is in the upright position

74 Scarlet Fever or Fourth Disease?—Attention is directed by Illoway to four cases seen by him in which the diagnosis was somewhat doubtful as to whether they were cases of scarlatina or the so called fourth disease

76 Treatment of Whooping-Cough.—In this article Kilmer states that in the three years which have elapsed since he first announced his treatment of whooping cough with an abdominal belt, the recorded cases show conclusively that about 95 per cent of cases are positively benefited This is especially true, he asserts, in regard to the cessation of vomiting The belt first described by Kilmer in THE JOURNAL A. M. A., Dec 10, 1904, was composed of a long strip of elastic webbing placed over a stockinette band, this, while efficacious was warm to the child and expensive for the parents The new belt described by Kilmer in this article is made of linen with a strip of silk elastic webbing two inches wide inserted on either side The belt laces in the back and is worn over the undershirt or band The width of the belt for infants is from four to five inches, and for older children from five to eight inches Its length should be such that when complete it will measure three inches less than the circumference of the abdomen at the navel The degree of constriction should be determined in the individual case

Therapeutic Gazette, Detroit
February 15

77 *Medical Management of Pregnancy F P Davis Philadelphia
78 *Hygiene and Management of Pregnancy G M Boyd Philadelphia
79 *Management of Pregnancy R C Norris Philadelphia
80 *Management of Normal Pregnancy B C Hirst Philadelphia
81 *Artificial Feeding of Infants in Private Practice M H Fussell Philadelphia
82 *Clinical Significance of Variations in Blood Pressure H A Hare Philadelphia

77 Medical Management of Pregnancy.—Davis discusses the care of the pregnant woman in all particulars except such as may demand operation, including the diagnosis of early pregnancy, and the preparation of the patient for labor

78 Id.—Boyd covers practically the same ground in his paper as was considered by Davis He urges that the physician should familiarize himself thoroughly with all the features of each case so that when labor begins he will be prepared properly to meet any emergencies that may arise

79 Id.—Norris emphasizes the importance of frequent careful and thorough examinations of the urine in connection with the management of pregnancy He also publishes a full list of articles which the mother is instructed to have in readiness after the seventh month of pregnancy He says that because the physician ordinarily does not often meet with serious complications is no reason why he should not study each case thoroughly

80 Id.—Hirst says that the chief danger to the pregnant woman is from toxemia, therefore, everything possible should be done to secure perfect elimination The urine should be examined often

81 Artificial Feeding of Infants.—Fussell is satisfied from personal experience that a modification of milk is practical for feeding infants He favors the formula proposed by Rotch and Holt

82 Variations in Blood Pressure.—Hare emphasizes the fact that in some conditions the tension which is above normal is not rarely present in moderate degree as an endeavor on the body to meet a need, and that sometimes a moderate degree of hypotension is in one sense physiologic in some illnesses, and should not be interfered with The physician who whips up the circulation at this time solely because the tension is low forces his patient to an expenditure of energy which is wasteful and dangerous Hare claims that only when overaction of the heart is due to low tension, or when renal or pulmonary stasis results from this cause, is interference required It is unwise, he declares, to give drugs to the patient simply because the arterial tension is high or low

Archives of Ophthalmology, New York.
November

83 *Prevention and Treatment of Eye Affections from Venereal Disease H Knapp New York
84 Dependence of Accommodation and Motility on Refraction of the Eye H Knapp New York
85 *Sudden Blindness Following Suppurative Conditions About the Eyeball A Knapp
86 Double Congenital Aniridia with Glaucoma and Cataract D N Dennis Erie Pa
87 *Rare Path of Infection of an Orbital Abscess C Barck St. Louis.
88 Atrophy of the Iris. A Franck Germany

83 Eye Affections from Venereal Disease.—Knapp's paper is an address delivered before the Philadelphia Society for the Study and Prevention of Social Disease. In it he discusses briefly what is known of the ocular complications and sequelæ of gonorrhea and syphilis

85 Blindness Following Suppuration About Eyeball.—That sight is occasionally suddenly lost when there is an acute suppurative process in the neighborhood of the orbit is shown by Knapp The orbital symptoms are those of cellulitis of varying intensity, and the ophthalmoscopic picture is that of an embolism of the central retinal artery with consecutive optic atrophy and obliteration of the arteries Three cases in point are reported (1) Blindness following an operation for empyema of the frontal sinus, (2) blindness following periostitis of the superior maxilla of dental origin, and (3) blindness from penetrating wound of orbit with cellulitis

87 Rare Path of Infection of Orbital Abscess.—Barck reports the case of a boy who was hit on the temple by a stone Two days later high fever set in on the third day the upper lid commenced to swell and on the fourth day he was unable to open the eye. The boy became comatose and delirious An operation was decided on and this led to the discovery that the infection from the temple wound had extended through an emissary vein into the orbit and from there to the meninges, which accounted for the symptoms manifested

Southern California Practitioner, Los Angeles.

February

89 *Review of 700 Cases of Smallpox I R Bancroft, Los Angeles Cal
90 Shock in Relation to Surgical Procedures and Anesthesia. T G Davis Los Angeles Cal
91 Health and Development of School Children G L Leslie, Los Angeles.

89 Smallpox.—Bancroft reports on 700 cases of smallpox seen by him during an epidemic which occurred in Boston in 1901 Of the total number of cases, 18 per cent occurred in patients under 5 years of age, while only 3 per cent of the patients were between 6 and 10 years The next largest number of cases, 114, occurred in individuals between the ages of 26 and 30 All the patients under the age of 10 showed either no vaccination or a doubtful one. As the effect of compulsory vaccination wears off the number of cases gradually increases, which accounts for the 16 per cent occurring between 26 and 30 years These cases further showed that a fatal case of variola does not occur after a recent successful vaccination, and that vaccination also has an effect on the length of sickness On analysis of the cases that terminated fatally and in which vaccination was established, it was found that the youngest patient was 28 years old, and the average was 47 years The 8 per cent of mortality in these cases compares favorably with the 26 per cent mortality among the unvaccinated Bancroft affirms his belief in the absolute power of vaccination to prevent smallpox

Bulletin of the Johns Hopkins Hospital, Baltimore.

February

92 Trachoma in the American Negro J Bordley Baltimore
93 Four Cases of Membranous Dysmenorrhea E. Morse Baltimore
94 The Medical Life of Oliver Wendell Holmes J H M Knox, Jr Baltimore
95 *The Blood in Pernicious Anemia C P Emerson, Baltimore
96 Volume and Color Index of the Red Corpuscles P Wroth, Jr Baltimore
97 *Pulsating Empyema W J Calvert, Columbia, Mo

95 Blood in Pernicious Anemia.—A careful study of 89 cases of pernicious anemia was made by Emerson from the viewpoint of the blood The results are presented in such detail as to preclude the making of an abstract

97 Pulsating Empyema.—Calvert presents additional experimental results obtained by him in the study of this condition

Fort Wayne Medical Journal Magazine

98 *Have We a Specific for Typhoid J L Gilbert, Kendallville Ind.
99 *Multiple Invaginations of the Bowel D C Wybourn Sheldon Ind
100 *Terminations and Treatment of Extrauterine Pregnancy A P Heineck, Chicago

98 Specific for Typhoid.—Gilbert suggests as a specific for typhoid the administration of one grain of sulphate of copper every four hours for, perhaps three days

99 Multiple Invaginations of Bowel.—Wybourn reports the case of a girl, 6 years old, who suffered from sudden and severe attacks of abdominal pain accompanied by persistent vomiting An operation having been decided on, in order to reduce a supposed intussusception, the abdomen was opened, but instead of finding an intussusception there were discovered three enteric invaginations each about one and one half inches deep, without inflammatory adhesions The invaginations were reduced and the patient made a complete recovery

100.—This article also appeared in Surgery, Gynecology and Obstetrics February, 1907 See abstract in this issue of THE JOURNAL, paragraph 36, page 1138

American Journal of Surgery, New York.

March

101 Cancer of the Uterus with Special Reference to Wertheim's Operation M I Rosenthal Fort Wayne Ind
102 Rational Treatment of Fever in the Puerperium S M. Brickner New York
103 Combination of the English and French Obstetric Locks, for the Prevention of Dangerous Compression of Fetal Head by Forceps A E. Gallant New York City
104 Blood Examination in Surgical Diagnosis. I S Wile New York
105 Surgical Postures M W Ware New York
106 Immediate Correction of Congenital Club-Foot E. W Ryerson Chicago

Albany Medical Annals

March

107 The New Ellis Hospital C G McMullen Schenectady N Y
108 Present Status of Bier's Method of Treatment by Congestive Hyperemia J M. Berry Troy
109 Inebriety Should Be Studied in Medical Colleges. T D Crothers Hartford Conn
110 Diet in Diseases of Children W G Murphy Hartford

The Journal of the Outdoor Life, Trudeau, N Y

March

111 Tuberculosis Congress L F Flick Philadelphia
112 What Shall Our Tuberculosis Patients in the Southwest Do When Summer Rolls Around? W Freudenthal New York
113 Outdoor Life as it Goes On Summer and Winter in the California Fastnesses C H Shinn California

Mississippi Medical Monthly, Vicksburg

March

114 Treatment of Cystitis. T J Ray Deeson
115 Obstetrics. W H Barnes Homewood.
116 Nosebleed. S L. Barnett, Arnold
117 Curettage Under Cocain Anesthesia. E. A Cheek Arcola.

Annals of Gynecology and Pediatry, Boston

February

118 Ectopic Pregnancy H F Quackenbos New York
119 Methods of Feeding at the Boston Floating Hospital J K Wardwell

Philippine Journal of Science, Manila

January

120 Comparative Ecology of San Ramon Polypodiaceæ E. B Copeland

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FOREIGN

Titles marked with an asterisk (*) are abstracted below Clinical lectures single case reports and trials of new drugs and artificial foods are omitted unless of exceptional interest

British Medical Journal

March 2

1 *Idiopathic Dilatation of the Colon H P Hawkins
2 *Case of Enterospasm E O Ashe
3 *Simple Colonic Adhesions a Cause of Intermittent Attacks of Abdominal Pains A F Maylard
4 *Operations for Removal of Malignant Growths from the Nasopharynx F Eve
5 *Trypsin in Cancer W S Bainbridge New York
6 *Influenza Commencing with Sudden Unconsciousness and Excessive Dyspnea. W Harris
7 *Cystine Calculi. F A. Southam
8 Kala azar L. Rogers
9 *Treatment of Eczema H Waldo
10 *Obstruction of Esophagus D McKenzie
11 *Antistreptococcic Serum in Puerperal Fever E W Smyth
12 *Foreign Body in Appendix E J W Porter

1 Idiopathic Dilatation of Colon.—The clinical history of this condition is illustrated most effectively by Hawkins in the recital of nine cases, occurring in patients ranging in age from three weeks to 48 years He says that the difficulty lies in distinguishing the early stage of this condition from a simple constipation and in recognizing the point at which the case must pass from physician to surgeon The picture of the condition comprises 1 A history of constipation from birth or from the earliest recollection, which is compatible, however, with fairly good health, until the final stage is at hand, the first sign of failure being often a loss of weight 2 A constipation which often alternates with diarrhea, and which at its worst is unlike that of obstruction, inasmuch as flatus is often passed and fecal matter may be drained away through a rigid rectal tube. 3 Abdominal enlargement, variable or constant, often asymmetrical with prominence in the left iliac region, the abdomen, though distended, being seldom tense, and often surprisingly flaccid, and rarely presenting any impairment of resonance 4 Slow alterations in shape, especially in the left iliac region, observable only with patience quite unlike the tense peristalsis seen in real obstruction 5 The absence or rarity of pain and vomiting Neither with real intestinal obstruction nor with simple non dilating constipation should there be any confusion when this condition is far advanced

2 Enterospasm.—Ashe reports a case of enterospasm occurring in a strong healthy woman aged 22 At the operation it was found that the small intestine was very much narrowed for about seven inches of its length There was no gradual tapering of the wide into the narrow part but at the end of the narrow part the natural sized bowel abruptly became contracted and at the other resumed its natu[illegible] r[illegible] [illegible] [illegible] rt was

firmly contracted, but was to some extent pervious The contracted part was covered with warm cloths while a further search was made for other causes of the spasm Nothing was found, however, but on removing the cloths from the contracted part it was found to have resumed its normal appearance and size The bowel was returned to the abdominal cavity without further intervention The patient made a perfect recovery

3 **Colonic Adhesions as Cause of Abdominal Pains.**—Maylard reports two cases, both occurring in women, in which simple colonic adhesions were responsible for severe attacks of abdominal pain In one case, the symptoms suggested chronic appendicitis Operative intervention afforded complete relief in both cases Maylard suggests that the pain was caused more particularly by the dragging effects produced by the adhesions which interfered with the normal peristaltic action of the bowel

4 **Removal of Malignant Growths from Nasopharynx.**—Eve describes several operative procedures which he has devised and employed with success On two occasions he carried out a method of osteoplastic resection of the upper jaw, which completely preserves the integrity of the jaw and at the same time admits of the fullest exposure of the nasopharynx and upper and back part of the nose A ligature is placed on the external carotid artery and laryngotomy is performed An incision is made, extending from the angle of the mouth to the lower margin of the malar bone, at a point corresponding to the anterior end of the masseter The parotid duct is separated at its entrance into the mouth by a circular incision and is then turned back The malar bone is divided by introducing Gigli's saw through the sphenomaxillary fissure The muco periosteum of the hard palate having been divided in the median line the hard palate and alveolus are also severed by a Gigli saw which has been drawn through from the mouth by an aneurism needle passed along the inferior meatus and through a puncture at the junction of the hard and soft palates The soft palate is severed from the hard from the middle line as far as the posterior margin of the alveolus A broad and blunt chisel is then driven horizontally between the tuberosity of the upper jaw and the pterygoid processes By pressing the handle backward the upper jaw is levered out of its bed and turned upward and forward As the skin incision is only carried as high as the lower level of the malar bone, the fibers of the facial nerve going to the orbicularis oculi are not divided After removal of the growth the maxilla is replaced and the severed edges of the malar bone united by a wire suture A piece of thin silver wire may also be passed round the incisor teeth on each side of the incision through the alveolar process anteriorly The incision between the hard and soft palates and the two halves of muco periosteum of the hard palate are sutured The end of the parotid duct is thrust into the mouth and secured in position by a point of catgut suture Finally the skin incision is closed.

5 This article appeared in the *New York Medical Journal* March 2 1907, and was abstracted in THE JOURNAL, March 16 1907, page 974

6 **Unusual Onset of Influenza.**—Harris reports the case of a man who had three attacks of influenza in the course of fifteen years each attack commencing with sudden unconsciousness lasting about 20 minutes and followed by fever, severe headache, pains and bronchitis

7 **Cystine Calculi.**—Southam reports one case of cystine calculus of the kidney and one of the bladder, the latter being the only instance of its kind seen by the author in a series of 140 cases The stone in the bladder was removed by suprapubic cystotomy The renal calculus was passed through the urethra

9.—An abstract of this article appears in the Therapeutic Department of this issue, page 1133

10 **Obstruction of Esophagus by a Pea.**—McKenzie reports a rather curious case of obstruction of the esophagus There was no dyspnea, no cough, and no spasm, but the patient was unable to get anything beyond the obstruction The patient's story was that she put a dried pea into her mouth and it suddenly slipped over, giving rise to a violent choking The woman also had an aneurism of the innominate artery and it was presumed that the pea was arrested at the place where the aneurism was pressing on the esophagus It was possible to pass a catheter past the obstruction, but all food or drink that was taken was regurgitated A quart of milk was run in through the catheter, and after the withdrawal of the instrument the patient vomited and ejected the pea. The foreign body had evidently been resting at the upper end of the narrowed portion of the gullet, where it lay loose, but in such a manner as to act like a ball valve Its small size and spherical shape had prevented the usual esophageal regurgitant movements from seizing the body and passing it upward

11 **Antistreptococcus Serum in Puerperal Fever.**—Smyth reports a case of puerperal fever occurring in a primipara in which the injection of three doses, 10 c.c. each, at 12 hour intervals, of a polyvalent antistreptococcus serum was followed by immediate recovery

12 **Foreign Body in Appendix.**—In the case reported by Porter it was found at the operation that the attack of appendicitis in all probability was due to the presence in the lumen of the appendix of three grains of No 6 shot The patient, a soldier, stated that rabbit pie formed a frequent dish in his mess Evidently a shot had found its way into the intestinal tract by this means

The Lancet.

March 2

13 *True Aim of Medical Education and Evil of the Examination Fetish J F Shaw
14 *Faints and Fainting W S Gowers.
15 Kala-azar L Rogers
16 *Insanity with Special Reference to Prognosis A R Urquhart
17 *Uterine Fibroids A E Giles
18 *Intestinal Obstruction in Children E P Baumann
19 Case of Pneumococcal Cerebrospinal Meningitis Simulating Spotted Fever A H Cook and G F McCleary

13 **True Aim of Medical Education.**—Shaw directs attention to the blighting influence of the examination system on the work of teachers and pupils from beginning to end of the modern medical curriculum He maintains that the examination fetish as he calls it, is year by year gaining a greater hold on medical education that its influence is detrimental, and that it has a demoralizing effect He says that one of the worst features of examinations is their tendency to be so conducted as to require the knowledge of an increasing number of facts from succeeding batches of victims By a careful study of the examination papers and of the ways of particular examiners a teacher gradually learns to pack his pupils' brains with facts with so much regard to the ease of unpacking that the success of the dullest can be almost assured Shaw advocates replacing the examination system by intelligent inspection

14 **Faints and Fainting.**—Gowers emphasizes the fact that the functional state of the brain in syncopal unconsciousness is distinct from the failure of the blood supply that causes it and may be nearly the same as that which occurs in epilepsy, apart from the state of the circulation He also directs attention to the uncertainty regarding the precise mechanism through which heart failure is induced and to the occasional causal relation of syncope to epilepsy

16 **Insanity.**—Although Urquhart regards the pathologic forms of insanity as of little moment in respect to prognosis under present conditions as fixed, irrecoverable and already doomed he regards ordinary insanity as uncertain, curable and now even hopeful

17 **Uterine Fibroids.**—The basis of Giles' paper is a consecutive series of 150 cases of fibroid of the uterus treated by abdominal section Over half the total number of cases occurred between the ages of 40 and 50 four occurred in patients under 30 and two in patients 60 years old and over Of the 150 patients operated on 56 were unmarried and 94 were married Of the latter 34 have never been pregnant

Fifty seven patients had had between them 172 pregnancies, 38 of which terminated in miscarriages Giles rather inclines to the belief that the absence of pregnancy predisposes to the occurrence of fibroids He suggests that the modus operandi may be that the periodic congestion of the uterus in the preparation for this function expends itself, if continually thwarted, in pathologic, irregular and permanent, instead of physiologic, uniform and temporary hypertrophy After the menopause, when periodic congestion no longer occurs, the liability to the onset of fibroids ceases Hemorrhage, pain, abdominal swelling and pressure symptoms are the most prominent indications for operation Abdominal myomectomy was done 27 times in Giles' series, abdominal hysterectomy 109 times, panhysterectomy 11 times and oöphorectomy 3 times

18 Insanity.—Although Urquhart regards the pathologic reported by Baumann was of acute intussusception, which was reduced by manipulation The second case was also one of intussusception but simulated dysentery A diagnosis of dysentery was made and appropriate treatment instituted On the ninth day the attending physician performed a laparotomy and the intussusception was discovered The patient died two hours after, the intussusception in this case was incomplete The diagnosis in this case was complicated by the fact that another child of the same family, at about the same time, passed blood stained stools

Australian Medical Gazette, Sydney

January 21

20 The Medical Ideal A J Turner
21 Precipitin Reactions in Relation to State Medicine and Public Health D A Welsh and H G Chapman
22 *Fibroid of the Uterus Weighing 19 Pounds Removed from a Patient Aged 70 W J S McKay
23 *Streptothrix Infections with Special Reference to the Pulmonary Form S Jamieson
24 *Aspects of Spinal Anesthesia. F Hinrichsen

22 Fibroid of Uterus.—McKay's patient lost no blood whatever, she exhibited no signs of shock The tumor, when bisected, proved to be an enormous submucous polypus which had grown from the fundus and had gradually distended the uterus and cervix, so that they were represented by a thin envelope of tissue which could be stripped off the polypus with ease

23 Streptothrix in Infections.—James reports a case which illustrates the points of importance in differentiating between these cases and those of ordinary pulmonary phthisis In streptothrix infections the lesion is more commonly situated in the base of the lung, whereas in phthisis it is the apex that is most frequently infected In streptothrix infections the disease always tends to spread by direct continuity, irrespective of anatomic boundaries, and so in course of time ulceration through to the surface takes place, as in the case just reported Excavation of the lung tissue does not occur to any extent, but rather a consolidation with infiltration by the *Streptothrix granulomata* As a consequence thereof hemoptysis was a marked feature Pleuritic pain was not a marked phenomenon Temperature is more irregular in type in streptothrix infections than in ordinary phthisis, and is, as a rule, of lower range James emphasizes the fact that in all cases of chronic pulmonary affection in which the physical signs are suggestive of phthisis but in which examinations of the sputum on several occasions fails to reveal the presence of tubercle bacilli, the sputum should be stained by Gram's method and a systematic hunt made for filaments of a streptothrix

24 Spinal Anesthesia.—Hinrichsen says that spinal anesthesia is still in the experimental stage and can not, therefore, be recommended for general use

British Journal of Tuberculosis, London

January

25 Study of Tuberculosis a Retrospect C Allbutt
26 An Anticipation R W Philip
27 Care and Control of the Consumptive Poor in the British Isles P D Powell B Bramwell and J W Moore
28 Tuberculosis and National Efficiency I Brunton
29 Climate as a Factor in Treatment of Tuberculosis H Weber
30 The Combat with Consumption a Contrast. S Wilks
31 Treatment of Hemoptysis by Amyl Nitrate F Hare

Indian Medical Gazette, Calcutta

February

32 The Distribution of Two Species of Bedbug W S Patton.
33 The Carbuncular Form of Plague G N Mittra
34 Surgical Treatment of Chronic Dysentery E. F G Tucker
35 Use of Adrenalin in Plague K. B N H Choksy
36 Conservancy of the Smaller Towns in Burma J Entrican
37 Extraction of Cataract in the Capsule H Smith

Presse Médicale, Paris

38 (XV No 7 pp 49 56) Experimental Surgery (Chirurgie expérimentale.) T Tuffier
39 *Medical Ethics (La morale professionale du médecin) A. Pinard
40 Diet for the Tuberculous (L'alimentation dans la tuberculose pulmonaire) C Malibran
41 (No 8 pp 57 64) *Gummatous Heart Block (Maladie de Stokes Adams par lésion scléro-gommeuse du faisceau de His—Herzblock) Vaquez and Esmein
42 *Lactic Ferment for Disinfection of the Intestines (L'emploi des ferments en vue de la désinfection intestinale) A Fournier
43 (No 9 pp 65 72.) Fat Acids and the Tubercle Bacillus (Acides gras et bacille tuberculeux.) J Camus and P Pagniez
44 *Disinfection of Japanese Troops on Their Return from Manchuria (Désinfection des soldats japonais) P Desfosses
45 *Treatment of Hemorrhoids by Local Injection of Carbolized Glycerin (Traitement des hémorrhoides) H Vulliet
46 (No 10 pp 73 80) *Auscultation of the Apex in Young Soldiers (Anomalies respiratoires.) G H Lemoine
47 Aid for Maternity (Assistance maternelle) V Rue
48 Why and When to Use the Stomach Tube (Sonde stomacale) A Martinet

39 Medical Ethics.—Pinard quotes Voltaire that there is only one morality, as there is only one geometry Very few people know geometry, but as soon as they study it a little they are all in accord He protests against the remark he so frequently hears from patients "I consulted a little doctor around the corner," or "a little country doctor where I was staying" He drew the picture of these "little doctors" for ever traveling around the city streets and climbing stair cases or jogging along the country roads going going going all the time never refusing their services going into the wretched retreats of poverty, knowing well from dire experience that they can not rely on being paid for their services, not even with gratitude but going still, simply doing their duty as they see it "These," Pinard remarks " to my mind are the great physicians" Among other phases of medical ethics he discusses the question of responsibility observing that few professions require such prompt decisions as the medical profession or impose such a burden of responsibility He has known physicians who gave up the idea of practicing after graduating with high honors crushed by the weight of the responsibilities of a medical practice Commenting on the fact that success does not always crown effort, even the most skilful the most conscientious he says that the physician is neither infallible nor all powerful In case of failure he must always expect to be blamed In case of failure he may be arrested treated as a malefactor and imprisoned, but the fear of blame should not deter him even if it brings him in conflict with the courts of justice if he acts according to the rules of the art The question as to whether or not a physician should ever interrupt the course of a pregnancy, Pinard answers by saying that it is justifiable only when the mother is on the point of death from some affection caused or aggravated by the pregnancy If the physician does not interfere both mother and child will die, as the child is as fatally condemned as the mother By interfering the physician has a chance of saving the mother Referring to the question of professional secrecy Pinard says that it is a good symbol of the role of the physician in society his task being to defend at the same time the interests of the individual and the interests of the public at large Brouardel advised physicians to maintain the strictest professional secrecy at all times but in daily life he frequently violated this rule and Pinard thinks that there are many occasions when the physician would be acting contrary to his sense of right if he adhered strictly to the letter of the law In case one of his clients in [illegible] of venereal disease announced his approaching marriage and could not be induced to postpone it he could directly to the father [illegible] him Do not give

man" This is all he would say, but this would surely be enough He might be sued for damages by his client, and he might be condemned by the courts, but his conscience would be at peace He thinks that this mode of conduct should be taught in the medical schools In this point he differs from other French writers on medical ethics He believes that the time is coming when the matter of health on both sides in the marriage contract will be regarded more than at present, and that the family physicians of the two families will confer, as the lawyers now confer over the marriage settlement On the other hand, he declares that he would never denounce any one to the courts He might testify that a man was the victim of poisoning but he would never suggest who had done the crime He would violate professional secrecy by reporting that a child to whom he had been called was the victim of inhuman treatment, and he would report to the authorities a case of epidemic disease but no power could compel him to denounce the author of a crime He would also warn a wet nurse that she would be incurring great risks if she took charge of a child whom he knew to have inherited syphilis if the parents insisted on engaging her, *against his* warning In regard to the question of fees, he says that the physician frequently gives advice to individuals and to communities which conflicts directly with his material interests Members of no other profession do this, and physicians thus occupy a place apart In charging for his services the physician should bear in mind the situation of his client and the importance of the service rendered The patient sometimes fails to recognize the importance of the service rendered, as when the physician discovers some affection and refers him to a surgeon but the sharing of the fee is only justifiable, proper and ethical when it is done openly before the patient

41 **Gummatous Heart Block**—Vaquez and Esmein give the clinical history of a case of a syphilitic lesion in the bundle of His, under observation for several months The Stokes Adams syndrome and the tracings of the pulse revealed the obstacle to the transmission of the impulse in the heart—the ventricular pause coinciding with the persistence of the contraction of the auricle Autopsy showed the obstacle to be a sclero gummatous lesion in the bundle of His The patient was a man of 49, the first signs of trouble being syncope with convulsions on waking such crises recurring at intervals Sometimes during a crisis the pause in the pulse lasted as long as 6 seconds it ranged between 36 and 60 at other times The recent researches on the anatomic basis for the Stokes Adams syndrome have thrown much light on the origin of paroxysmal and permanent bradycardia

42 **Ferments for Disinfection of the Intestines**—Fournier says that the ideal disinfectant for the intestines would be an aërobic ferment able to transform sugar into formic acid, but nothing of the kind is known Brewer's yeast answers some but not all of the desired conditions for a disinfectant, and it frequently fails to exert any action, while the generation of alcohol is not always desirable *and the yeast is* not resistant enough to act along the entire length of the digestive tract The only ferment known to date which adapts itself to anaërobic conditions and acts directly on the carbohydrates while very resistant to external influences, is the lactic ferment The combination of the lactic streptobacillus and the lactic streptococcus in symbiosis is proving an efficient and reliable means of disinfecting the intestines

44 **Disinfection of the Japanese Troops on Their Return from Manchuria**—Desfosses gives an illustrated description of one of the disinfection stations where the 800 000 troops returning from the campaign in Manchuria were disinfected, persons arms and baggage Not even the highest officials were allowed to land *without passing through* the disinfecting station About an hour and ten minutes were required for the process the effects being disinfected while the men bathed and afterward in dressing gowns smoked a cigarette and took a cup of tea in the last hall through which they were passed before their effects were returned to them in the bags in which they had been checked The precautions against importation of disease were carried to such a point that all the money brought from Manchuria was taken up in the stations and fresh Japanese bills given in exchange Desfosses states that he does not know which to admire most, the spirit of detail, the spirit of organization, or the spirit of discipline which made this summary disinfection of 800, 000 men possible He adds that the Japanese apply the scientific methods learned from western civilization with a rigor and a fidelity which western countries might do well to imitate

45 **Treatment of Hemorrhoids with Carbolized Glycerin**—Vulliet uses a 60 or 80 per cent solution and injects the fluid at the base of each hemorrhoidal nodule, guided by the finger in the anus A Pravaz syringe is used, and one or two drops are injected into the base of each nodule The patient should be under the influence of an anesthetic to complete relaxation, and the sphincter should be stretched slowly with the thumbs bent at right angles The nodules swell and turn a color that is apt to alarm the physician the first time, but there is nothing to fear The patient has to stay in bed for from three to five days as the nodules gradually shrivel No assistance is required for the injections and no special preparation There is no bleeding, and the ultimate results, he asserts, are excellent, just as after more radical intervention

46 **Anomalies in Respiration as Early Sign of Tuberculosis**—Lemoine found in examining 945 men entering the military service that 99 showed some anomaly in respiration on auscultation at the apex In 18 the anomalies were explained by *an old* pleurisy, but in the others they suggested a possible tuberculous process They were observed almost exclusively with persons showing an inherited predisposition In determining their aptitude for the military service the general condition was the principal factor considered When this was good the soldiers were not dismissed, but were kept under observation, and weighed *monthly* The results confirmed the advantages of military service in such cases, the conditions of life being more hygienic than in factories or the like The men gained in weight and threw off their respiratory trouble with but few exceptions In these, persisting emaciation exaggerated fatigue and slight impairment of the general health were regarded as sufficient cause for *dismissal without waiting for other* signs of tuberculosis Lemoine's examination of thousands of men has demonstrated that inspiration is stronger on the right than on the left side in young men, except in the left handed The difference between the two sides is more marked in men who have occasion to use the right arm considerably Auscultation of the preclavicular region is particularly instructive, as also of the top of the axilla The examination should be repeated three times, with a month's interval for absolutely reliable findings Among the 945 men examined, in 64 there was a settled and persisting diminution of the inspiration noted on auscultation of the right subclavicular region In another group, besides the settled and persisting diminution in inspiration, expiration under the right clavicle was unduly prolonged In another group the inspiration was rough and low on auscultation of the left clavicle, and in some there was unduly prolonged expiration One man exhibited respiratory insufficiency of the entire right lung He gained in weight and left the service at the end of his term in perfect general condition The men thrived in camp and barracks, and the respiratory findings became normal, as after a course in a sanatorium

Semaine Médicale, Paris

49 (XXVII No 8 pp 85 96) Anatomic Conditions Necessary for Ileocecal Invagination (Invag ileo-cecales) R Leriche and P Cavaillon
50 *Cancer (Cancer et milieu intérieur) L Legrand
51 *Uterine Hemorrhage In Syphilitics (Métrorrhagies par lésions syph. de l utérus.) A A Mouratov

50 **Cancer**—Legrand ascribes to the blood the rôle of maintaining in the normal path of development the cells of the vertebrate animals The stability of the composition of the blood corrects the deviations impressed on the evolution of the cells by external influences Cancer research, he thinks, should be conducted along the lines of the specific cytotoxic

serums, with special regard to the development of the innocent tumors as the first step toward knowledge of the pathogenesis of cancer He points out as a significant fact that the vertebrates alone have the sad privilege of cancer, and that they do not have it during the embryonal stage when the conditions approximate more closely those of invertebrate existence

51 **Metrorrhagia in Syphilitics**—Mercurial treatment is sometimes able to conquer rebellious uterine hemorrhages even in women supposedly free from venereal disease Several striking instances are related of complete relief from the distressing metrorrhagia under a few days of mercurial medication The hemorrhage may occur in such cases without any appreciable lesion in the uterus

Archiv f Verdauungs Krankheiten, Boas', Berlin.
Last indexed XLVII page 1420

52 (XIII No 1 pp 1 100) *Total Simple Inflammatory Contraction of the Stomach and Fibroid Polyserositis—Icing Stomach.' (Totale einfach entzündliche Magenschrumpfung und fibröse Polyserositis—Zuckerguss K. v Sury
53 *Further Remarks on the Digestive Bead Test. (Perlenverdauungsprobe) M. Einhorn
54 Elastic Tissue of the Stomach. (Elastisches Gewebe des Magens) E Schutz
55 *Case of Rheumatism of the Stomach with Incidental Hematemesis of Uncertain Origin (Rheumatismus des Magens mit gelegentlichen Hämatemesen) H Illoway
56 Pathology of Catarrhal Icterus (Icterus catarrh) L Fischl

52 **Total Inflammatory Contraction of the Stomach.**—After reviewing 172 original articles from the literature bearing on gastric cirrhosis and fibroid degeneration, von Sury reports a case with the postmortem findings in which the clinical diagnosis had been cancer of the stomach, in a person long subject to valvular incompetency The patient was a man of 65 and the anatomic findings also suggested diffuse scirrhous carcinosis of the stomach, involving the peritoneum, pleura and pericardium The microscope, however, failed to confirm the diagnosis of cancer, and the findings are interpreted as representing the final stage of a simple, inflammatory, more or less general uniform contraction of the stomach, gastric cirrhosis, accompanied by a fibroid polyserositis He concludes from these data that simple inflammatory contracted stomach is a morbid entity *sui generis*—in the present case the result of congestion from a cardiac defect Differentiation is possible only with the microscope

53 —This article has already appeared in THE JOURNAL, Feb 2, 1907, page 407

55 —See THE JOURNAL, Feb 17, 1906, page 541

Berliner klinische Wochenschrift

57 (XLIV No 5 pp 125-148) *Spirillum obermeieri (Spirillum Obermeieri) C Fraenkel
58 *Experimental Study of Serum Diagnosis of Syphilis. (Wassermannsche *Serodiagnostik* bei Lues) A Schütze
59 *Juvenile Physiologic Albuminuria. (Juv phys Albuminurie) B Ullmann
60 *Phototherapy in Dermatology (Anwendung des Lichtes in der Derm) Kromayer
61 *Importance of Infection from Milk for Origin of Primary Intestinal Tuberculosis in Children (Bedeutung der Milchinfektion) J Fibiger and C. O Jensen Concluded
62 *Treatment of Abdominal Bullet Wounds on the Field (Behandlung der penetrierenden Bauchschüsse im Felde) Hildebrandt
63 (No 6 pp 149 180) Present Status of Induced Premature Delivery (Künstliche Frühgeburt) J Veit
64 *Serum Treatment of Dysentery (Serotherapie bei Dys) T Skschivan and W Stefansky
65 *Sphygmoscope (Ueber ein Sphygmoskop) M Rheinboldt (Kissingen)
66 *Infant Feeding (Säuglingsernährung) W Lewin

57 **Spirillum Obermeieri.**—Fraenkel's extensive experimental research has demonstrated, he claims, that various animals are susceptible to this spirillum, especially white mice, and that infection confers active immunity The immunization however, did not protect against African tick fever, confirming the assumption that American relapsing fever and the African tick fever are distinct entities

58 **Serodiagnosis of Syphilis.**—Schütze's findings to date have always been corroborative of Wassermann's assertions in regard to the diagnostic value of the serum test based on Bordet's discovery of the specific complement binding The test has been described in these columns as the hemolytic test from deviation of the complement In testing for syphilis, it is applied to the cerebrospinal fluid, obtained by lumbar puncture

59 **Juvenile Albuminuria.**—Ullmann examined the urine of 42 school children a number of times and found albumin in a third of the cases, although the children were all healthy Only one had passed through scarlet fever, 9 had had measles and one recurring tonsillitis In 3 instances the parents stated that the children had never had an acute infectious disease On the other hand, a considerable proportion of the children free from albuminuria had a history of scarlet fever or measles in the past. The amount of albumin ranged from traces to 10 per thousand—this largest proportion being found in the urine of a girl in apparently robust health He remarks that this juvenile physiologic albuminuria usually vanishes without treatment or persists whatever treatment may be instituted It does not seem to have any effect on the general health or life expectancy

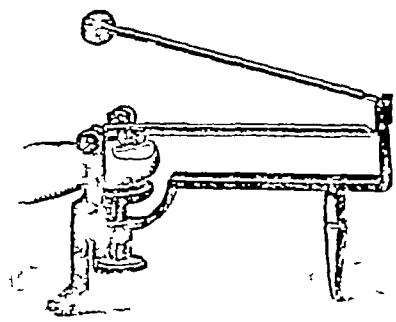
60 **Phototherapy in Dermatology**—Kromayer relates his favorable experiences with the quartz lamp which he has devised for application of the chemical rays to cutaneous affections

61 —See abstract No 89 in THE JOURNAL, March 9, 1907, page 914

62 **Treatment of Abdominal Bullet Wounds on the Field.**—Hildebrandt reviews the publications of the last few years on this subject, and states that the fate of those wounded in the abdomen depends in a great measure on the care with which they are handled and on complete abstention from food and drink In his experience in South Africa he remained with the wounded of this class, collected in a field hospital, relying on the consideration of the victorious enemy, and ascribes the low mortality, 44 per cent, to the circumstance that no attempt was made to transport the wounded

64 **Serum Treatment of Dysentery**—In this communication from Odessa, experiences in Russia with serum treatment of dysentery are reviewed and compared with those obtained elsewhere A series of 15 cases is reported in which the patients were treated with serum from a horse immunized with filtrates of three week cultures of the Shiga bacillus In the course of a year, 1,280 c.c had been injected, the curative serum obtained had a purely antitoxic action Slight if any by effects were observed and the curative results were most gratifying

65 **Sphygmoscope**—Rheinboldt has succeeded in producing an instrument which shows each pulse beat by the swinging of a long straw lever, thus allowing visual inspection of the pulse rate He does not apply the apparatus to the radial pulse but to the ball of the finger, the change in the circumference of the finger at each pulse wave being thus visually



The Sphygmoscope

recorded The pulse wave of course loses some of its force by the time it reaches the finger tip, and allowance must be made for this The illustration shows the little apparatus with the magnifying double lever used The patient sits beside the table, [illegible] arm b[illegible] a right a[illegible] ting its entire len[illegible] able [illegible] to the [illegible] nger at l[illegible]

easy reading of the findings renders the apparatus especially useful when prolonged examination of the pulse rate is required to determine its frequency, regularity and evenness. Any kind of arrhythmia is at once rendered objectively evident. In one instance Rheinboldt was able with this apparatus to convince a hypochondriac patient of the regularity of his pulse rate, in another case to prove to the patient the cure of his previous arrhythmia under treatment. In 2 cases the behavior of the lever suggested the possibility of unsuspected aortic insufficiency, which further examination revealed. In case of extremely feeble heart action, the apparatus sometimes fails, but, if applied again after physical exertion or hearty eating, then gives positive findings. The sphygmoscope by no means takes the place of the sphygmograph, but can be used a dozen times where the complicated Riva Rocci procedure would scarcely be thought of. Rheinboldt is convinced that this apparatus will prove extremely useful in daily practice.

66 **Successful Infant Feeding**.—Lewin reports five years of unfailing success in infant feeding with undiluted cow's milk. He believes that an organ develops better when demands are made on it, and from the fourth week gives the infants in his charge undiluted cow's milk. At first they are given 200 c.c. (nearly 7 ounces) of milk and the same amount of water. Each week 50 gm. (1½ ounces) are added to the amount of milk and the same amount of water is omitted. By the end of the first month the children are taking 400 c.c. (13½ ounces) of undiluted milk, and this amount is increased by 100 c.c. (3 ounces) each month. The only modification of the milk which he allows is the addition of milk sugar of which two tablespoonfuls are added to each quart. At first the children are fed every two and a half hours, the last feeding is at 10 p. m., after which nothing is given until morning, as he believes that the infant stomach needs rest as much as the adult. On this diet the children thrive, have no tendency to constipation, and they urinate less, thus relieving the child of chafing and eczema which is so often followed by furunculosis. No signs of rachitis have ever been observed in the children he has fed on these principles, and they do not have the large bellies noticed so often among artificially fed infants. He gradually reduces the number of feedings to four. The milk, in an earthen jar, is set in a pan of water and boiled up once; it is then covered and placed in a cool place. The less handling and the simpler the vessels used, he says, the more easily they are cleaned and the less danger of contamination of the milk. He adds that although these views contradict those generally accepted, they are the result of years of experience and observation, and the children have thrived, not only at the time, but afterward. The principles are not new, but have never been given the attention they deserve, while the general infant death rate still keeps appallingly high.

Deutsche medizinische Wochenschrift, Berlin and Leipsic.

67 (XXXIII, No. 7, pp. 109-208.) *Improved Technic for Rapid Staining of Blood Parasites, Spirochetes, Gonococci, Diphtheria Bacilli and Other Micro-organisms (Neues Verfahren zur Schnellfärbung, etc.). F. Loeffler.

68 *Spinal Anesthesia (Lumbalanästhesie mit Tropacocain). J. Bosse.

69 *Frequently Favorable Influence of Quinin on Uterine Contractions (Einfluss des Chinins auf die Wehenthätigkeit). A. Mäurer.

70 *Fever with Carcinoma. (Fieber bei Carc.) A. Alexander.

71 Ultra-violet rays in Ophthalmology (Uvioldehandlung und Augenkrankheiten.) Axmann.

72 Aspirating Pipette for Measuring Amounts of Serum for Agglutination Test. (Saugpipette zur Widalschen Reaktion.) Fischer.

73 Deafness and Its Causes in School Children (Schwerhörigkeit und deren Ursachen.) H. Laser.

74 Statistics of Breast Nursing. (Stillen.) F. Prinzing.

75 Lack of Suitable Dwelling Places. (Wohnungsmängel.) Landsberger.

76 *J. Loeb's Artificial Parthogenesis and Heterogeneous Hybridization. (Die Untersuchungen J. Loeb's.) E. Schwalbe.

77 (No. 6, pp. 209-248.) *Hysteria and Sickness Insurance. (Hysterie und Invalidität.) E. Meyer.

78 *Early Diagnosis of Chronic Lead Poisoning. (Frühdiagnose von chron. Bleivergiftung.) Frey.

79 Two Cases of Enlargement of Colon in Adults. (Hirschsprungsche Krankheit.) von Schuckmann.

80 General Anesthesia with Mixed Chloroform and Oxygen. (Die Narkose mit dem Roth-Draegerschen Tropf-Apparat.) B. Posenthal.

81 Precocious Menstruation and Sexual Characteristics in Child 3 Years Old. (Eine 3 jährige Virgo.) A. Stein.

82 Recent Legal Decisions in Medical Matters. (Rechtsprechung in ärztlichen Angelegenheiten.) Flügge. (Commented in No. 3.)

67 **Improved Technic for Staining Micro-organisms**.—Loeffler has found that by slightly modifying and boiling the Giemsa stain it is possible to show up the bacteria, the pale spirochete, and other micro-organisms within a few minutes. He has been making extraordinary efforts to find some technic that will show the germ of foot and mouth disease which is so small that it passes through filters and can not be detected even with the strongest microscope. He has been unsuccessful in these attempts, but the improved technic which he describes is one of the side issues in this research. The specimens must be thin and be fixed in alcohol-ether. They are then treated with four solutions: 1, a 0.5 per cent. solution of malachite green crystals with zinc bichlorid (Chlorzinkdoppelsalz); 2, a 0.5 per cent. solution of soda arseniate; 3, a 0.5 per cent. solution of pure glycerin, and 4, the Giemsa stain. Three drops of the arsenic solution and one drop of the malachite green solution are added to the specimen and allowed to remain in contact one minute. The specimen is then rinsed vigorously. Then 5 c.c. of the glycerin solution are poured into a test tube and from 5 to 10 drops of the Giemsa stain are added. The whole is then heated to boiling point over a flame and poured hot over the cover glass, where it is left for from 5 to 10 minutes, and is then poured off, after which the specimen is rinsed again under running water. The glycerin-Giemsa mixture can be boiled and used over and over again. He commends this technic as the simplest, most rapid and most effective known to date. For blood parasites and gonococci he uses a different technic which he believes to be equally an improvement over those now in vogue. To 4 parts of 2.5 per cent. borax and 1 per cent. methylene blue, one part polychrome methylene blue is added, and to the mixture is then added an equal amount of a solution of 0.05 per cent. bromeosin B extra. The specimen is then stained with the mixture, slightly warmed, for one minute, and then decolored with a mixture of 5 parts tropäolin 00, 0.5 parts acetic acid and 100 parts water, after which the specimen is rinsed anew. The blood corpuscles show pale with this technic, and the parasites in and between them stand out very prominently. Anthrax, plague, diphtheria, and influenza bacilli are also shown up well by this technic. With gonococci he decolors with a mixture of 177 parts alcohol, 20 parts of a 1 per thousand solution of bromeosin and 3 parts acetic acid. This draws the stain out of the nuclei of the cells, but not out of the gonococci, which take and keep the stain so intensely that they show well even under a low power microscope.

68 **Spinal Anesthesia**.—Bosse reviews the history of spinal anesthetics to date and states that experience has shown them to be by no means such harmless measures as was at first assumed.

69 **Influence of Quinin on Contractions of Uterus**.—Mäurer reports from Pfannenstiel's clinic 78 cases in which quinin was given during parturition to induce more energetic labor. In 61 cases the favorable influence of the quinin was unmistakable. It is entirely harmless for both mother and child, and proved exceptionally useful in promoting labor pains in induced premature delivery and in treatment of abortion. The quinin seems to make the uterine musculature more sensitive to the action of the nerves. It failed to show any influence in 17 cases, probably either because the musculature was abnormally weak or the dose too large, paralyzing instead of stimulating. About 1 gm. (15 grains) was given by the mouth and this dose repeated in two, four or five hours as the effect subsided. In very few cases was as much as 3 gm. (45 grains) required. About 11 hours had been the previous minimum duration of induced premature delivery in the clinic with the hystereurynter. This period was shortened by several hours by the quinin, so that delivery was complete in four and a half hours in two cases. In one case hemorrhage followed a fall in the fourth month of pregnancy. After five

days, the hemorrhage still continuing, 0 3 gm (about 5 grains) of quinin was given and repeated in half an hour Labor pains followed and the ovum and decidua were expelled within five hours without further hemorrhage As a rule, 1 gm (15 grains) of quinin is given, and, if no effect is observed, 0 5 gm after an hour and 0 5 gm half hour later

70 Fever with Cancer.—Alexander relates a number of instances of fever in cancer patients, the result of autointoxication from absorption of the toxic products elaborated by the carcinoma This is particularly liable to occur with cancer in the digestive tract. He states that there does not seem to be any characteristic type of the fever in these cases

76 Artificial Parthogenesis.—Schwalbe has translated into German J Loeb's publications on this subject, and is convinced that they represent a suggestive contribution to our knowledge in regard to the causation of malignant tumors In Loeb's experiments the cells are stimulated to extraordinary development by chemical influences, and recent research on cancer has rendered it probable that something of the kind is responsible for the excessive proliferation of the cancer cells Loeb's experiments also throw light, he thinks, on certain problems in teratology

77 Hysteria and Sickness Insurance.—Meyer reports several cases of pronounced hysteria in which the disturbances were so severe that they interfered with the earning capacity, and the individual was thus entitled to part pay from the sickness insurance society He reviews the differentiating points, remarking that hysteria is a psychic affection and that the psychic symptoms are the ones to be regarded as most important, though the physical symptoms must not be overestimated In all doubtful cases the patient should be under stationary observation The longer the patient is left untreated, the smaller the prospects of improvement. Treatment by "letting alone" can be successful only when the patient is under stationary observation Cases in which the severe symptoms have recently developed are more amenable to proper treatment than when these are long established The prospects are less favorable in the cases of hysteria which develop on the basis of long continued physical exhaustion or the menopause These belong more in the domain of hystero neurasthenia

78 Early Diagnosis of Chronic Lead Poisoning.—Frey states that for diagnosis, control of the results of treatment, and for personal prophylaxis, determination of granular degeneration of the red corpuscles is of the utmost importance Grawitz was the first to call attention to the value of this sign in certain affections and Frey has found it peculiarly instructive in lead poisoning When cancer, intermittent fever, pernicious anemia, sepsis and intestinal putrefaction can be excluded, the discovery of the basophilic granules in a person exposed to lead poisoning is a sign that he is seriously affected by the poison Grawitz recommends that workers with lead should have their blood examined from time to time as a prophylactic measure Frey reports his experiences in this line with 30 workers on lead whose blood was examined, confirming Grawitz's assertions in every respect

Münchener medizinische Wochenschrift

83 (LIV No 5 pp 201 248) Spirillum of Tick Fever (Spirillen des Zeckenfiebers) C Fraenkel
84 *Do the Leucocytes Have a Heterolytic Action? (Wirken weisse Blutkörperchen heterolytisch?) M. Mosse
85 *Heredity in Ulcer of the Stomach (Heredität beim Ulcus ventriculi) A Huber
86 *Pathology of Appendicitis (Appendizitis) M Flesch
87 Unilateral Clubbed Fingers (Einseitige Trommelschlägelfinger) T Groedel
88 *Frequency of Gonorrhea in Germany (Tripper in Deutschland) A Blaschko Id H Vörner
89 Color Index of the Red Corpuscles (Färbeindex) W Türk
90 Causal Agent of Vaccinia (Was wissen wir über den Vakzineerreger?) Mühlens and Hartmann
91 Superficial Action of Percussion (Oberflächenwirkung des Perkussionsstosses) A Weil
92 (No 6 pp 249 304) Resistance to Anthrax and Origin of Anti anthrax Substances (Milzbrand etc) M Gruber and K Futaki
93 *Antitoxin and Albumin (Antitoxin und Eiweiss.) F Hamburger
94 *Nervous Phenomena Accompanying Passage of Stomach Content Into the Intestine (Nervöse Erscheinungen beim Uebergang des Mageninhaltes in den Darm) F A Kehrer
95 Determination of Blood in the Feces (Blut in den Fäzes) O Schumm
96 Two Cases of Eosinophilia of Intestinal Origin (Darmeosinophilie) E Fricker
97 *Treatment of Mastitis with Cupping Apparatus (Mastitiden und Saugapparaten.) F Hartmann
98 Rubber Gloves Not Indispensable for Country Midwives (Sollen die Landhebammen mit Gummihandschuhen ausgerüstet werden?) H Walther
99 Lead Box for Roentgen Tubes. (Bleikasten für R Röhren) G W Schiele
100 Explanation of Tuberculin Reaction by Antituberculin in Tuberculous Focus. (Tuberkulinreaction durch Antituberkulin im tub Herd) E Weil
101 *Hospitals of Western Coast of American Continent (Hospitäler der Westküste Sud Mittel und Nordamerikas.) F Apelt

84 Heterolysis of Leucocytes.—Grawitz has announced that leucocytes are considerably more transparent for the ultra violet rays than the lymphocytes, suggesting chemical differences in the structure of their nuclei Others have shown that the leucocytes have a proteolytic action digesting albumin Mosse has been studying the subject and the action of bone marrow juice on lung tissue He found no signs of heterolysis by either leucocytes or lymphocytes

85 Heredity with Ulcer of the Stomach.—Huber reports 30 cases of ulcer of the stomach in which the influence of heredity was strikingly apparent through two or more generations and in relatives He has noted a racial predisposition, especially in regions where there is much intermarrying

86 Heredity in Appendicitis.—Flesch gives the genealogic trees of a number of families in which appendicitis occurred in series of cases In one family, 3 out of 24 persons were affected, and in another family 6 in two generations Considering the circumstances he thinks that the cause for the repeated cases is a functional one in the main Physical and dietetic measures to keep the bowels regular are the most important means of warding off appendicitis The series of cases in his experience generally occurred in persons living under the same conditions and the same influences

88 Frequency of Gonorrhea and the Effect on Wives.—These articles by Blaschko and Vörner were reviewed editorially in THE JOURNAL, March 2, 1907, page 800

93 Antitoxin and Albumin.—Hamburger found that the milk of goats and rabbits after subcutaneous injection of horse serum contained both antitoxin and horse albumin

94 Nervous Phenomena When the Stomach Content is Passing Into the Intestine.—Kehrer urges study of the phenomena that occur in some persons as the stomach content is passed along into the duodenum He thinks that regulation of the diet might prevent the annoying phenomena He speaks of three phases the phase of sensation of over loading of the stomach the digestive phase, during which the stomach is quiet and the phase of expulsion of the stomach content During the phase of expulsion local phenomena occur in the stomach, heart and lungs They consist in oppression in the epigastrium oppression or pain in the heart region especially when lying on the left side palpitation and suffocation These symptoms are probably due to direct mechanico chemical irritation of the ramifications of the vagus or reflex action from the stomach nerves on the nerves of the heart The oppression causes nightmare Any mechanical interference with the respiration for example by a blanket covering the face of the sleeper may cause nightmare Another group of nervous phenomena at the beginning of the phase of expulsion consists in waking out of the first sleep with bad dreams Kehrer thinks that the changes in the circulation of the brain from the flow of blood to the digestive organs causing comparative anemia of the brain are not so important a factor in these phenomena as generally supposed More probable he thinks is the assumption that some of the chyme passing into the intestines is absorbed immediately by the mucosa of the small intestine and is passed by way of the blood to the brain and there induces the above phenomena of irritation the the peptones the fat acids or the bile the duoden whether with morbid cts are or whether irritatin t of the disturbances

ther study, however, may prove very important for dietetics in general and for individual cases Persons who suffer from these disturbances should not eat just before going to bed, or, if they eat late, should allow a certain interval to elapse before retiring It is wise also to refrain from filling the stomach too full, and, especially at night, to take easily digested food

97 Treatment of Mastitis with Suction Apparatus—Hartmann has been very much pleased with the results of treatment of mastitis with Bier's suction apparatus The bell must be large enough to embrace the whole breast, and incisions should be made early, each fully 1, 2 or 3 cm long It is unnecessary to drain Pain is relieved at once and the fever reduced. Hartmann regards this as by far the best treatment of mastitis known to date, except for the subacute, nodular, non suppurative forms Exploratory suction shows by the circumscribed redness exactly where to incise for the abscess He remarks, in conclusion, that this cupping treatment is a boon to suffering humanity, when rightly applied, and opens a wide field for gratifying work on the part of the physician.

101 Hospitals of the Western Coast of the American Continent—Apelt describes his impressions of the hospitals in North, Central and South America, which he visited on a recent voyage in the Eastern Pacific. He pays high tribute to the work of the profession in San Francisco after the fire and also in the Canal Zone He describes, further, the peculiar disease observed in Peru, called verruga peruana—Peruvian wart He says that when a certain railroad was built, 75 per cent of the imported workmen suffered from this disease He was also impressed with the great frequency of tuberculosis in Central and South America

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102 (IV No 3 pp 525-740) *Tumors in Fish Frogs Salamanders and Lizards (Geschwülste bei Kaltblütern.) M Plehn

103 Function of Tumor Cells (Funktion der Geschwulstzellen) D v Hansemann

104 Primary Enchondroma of the Lung (Prim Enchondrome der Lunge) C Hart

105 *Tumors in Fowls (Tumoren bei Hühnern) M Ehrenreich and L Michaelis

106 Carcinoma and its Treatment in the Light of Biology (Carcinom und seine Therapie.) D Heilin

107 Histogenesis of Inoculation Tumors on Mice (Krebs der Mäuse) W Lowenthal and L. Michaelis

108 Tumors in Hilus of Kidney (Tumoren des Nierenhilus) A Salomon

109 *Appeal to the Public for Early Operative Treatment of Cancer (Aufforderung etc) J Dollinger

110 *Schüller's Corpuscles (Schüllersche Körperchen) M Schüller

102 Tumors in Cold-Blooded Animals—Plehn relates the details of nearly 24 cases of tumors in fish, frogs or eels, and reviews the literature on the subject. Certain kinds of tumors are observed only in certain species, carcinoma of the thyroid only in salmon and trout, for example superficial tumors only in certain other species The reasons for this selection will repay study He declares that fish are specially adapted for study of inherited conditions In one pond 7 per cent of the trout were affected with carcinoma of the thyroid, while the trout in neighboring ponds were entirely free from tumors

105 Tumors in Poultry—In this communication from the Berlin Cancer Research Laboratory a number of cancers found in poultry are reported They include 2 cases of fibroma in the mesentery, 2 of carcinoma and 1 of sarcoma of the small intestine Other tumors were found which contained always relics of the volk of an egg, and were usually adherent to the ovary

109 Appeal to the Public for Early Operative Treatment of Cancer—Dollinger gives the text of the circular which he now hands to every applicant at the clinic and dispensary in his charge at Budapest It is headed "Cancer can be cured if operated on early" It warns of the danger of delay, emphasizing the prospects of cure with early operation, and giving the signs of cancer in the various organs, with warnings in regard to the danger of wasting time on quacks and their remedies

Books Received

Acknowledgment of all books received will be made in this col and this will be deemed by us a full equivalent to those ... them A selection from these volumes will be made for review dictated by their merits, or in the interest of our readers

MANUALE PRATICO DELL' IGIENISTA, Per uso degli ufficiali ... degli aspiranti ad uffici nella amministrazione sanitaria dello s e dei comuni, degli allievi dei corsi complementari di ... degli studenti di medicina farmacia e veterinaria By C Ton and G Q Ruata, con Prefazione del Prof A. Serafini Con Incisioni. Cloth. Pp 64 Milan Ulrico Hoepli, 1907

CATHOLIC CHURCHMEN IN SCIENCE. Sketches of the Lives Ecclesiastics Who Were Among the Great Founders in Science James J Walsh M D Ph D LL D, Professor of Medical H... Fordham University Medical School Cloth Pp 221 Price, $1 net. Philadelphia The Dolphin Press, 1906

OHIO HOSPITAL FOR EPILEPTICS AT GALLIPOLIS Sixteenth Annual Report of the Trustees and Officers to the Governor of State of Ohio, for the Fiscal Year ending Nov 15, 1906 Pp Pp 82 Columbus F J Heer, 1907

PRINCIPLES AND APPLICATION OF LOCAL TREATMENT IN DISEASES OF THE SKIN By L D Bulkley A.M, M.D, Physician to the N York Skin and Cancer Hospital Cloth. Pp 142 Price, $1 00 Ne York Rebman Company 1907

SURGERY OF THE BRAIN AND ITS MEMBRANES By C A. Ballance M V O M S F R C S, surgeon to St. Thomas Hospital. W Illustrations. Cloth. Pp 405 Price, 15s net. London and ... York Macmillan Co, 1907

THE NUMERICAL PROPORTIONS OF THE SEXES AT BIRTH By J Nichols Memoirs of the American Anthropological Associati(Vol 1 Part 4 Paper Pp 300 Lancaster, Pa, New E Printing Co, 1907

LA TUBERCULOSI By Mario Valtorta and Gino Fanoli. Con Prefazione del Prof Augusto Murri Manuali Hoepli Con 11 tavol Cloth. Pp 64 Cloth Milan Ulrico Hoepli, 1907

GEDANKEN UND MEINUNGEN DES LAZARETTGEHILFEN NEUMANN Herausgegeben by Dr Fr Frhard Paper Pp. 88 Munich Verlag der Aerztlichen Rundschau 1907

GIFT ODER HEILMITTEL IM UNGLÜCK? Briefe eines Arztes by Dr med G Vorberg Hannover Paper Pp 26 Munich Verlag d Aerztlichen Rundschau, 1907

UEBER ARTERIENVERKALKUNG By Dr med Hirsch Bad Nauheim Dritte Auflage Paper Pp 24 Munich Verlag der Aerztlichen Rundschau, 1907

SURGERY OF GENITO-URINARY ORGANS By J W S Gouley M D Cloth Pp 531 Price $3 00 New York Rebman Company 1907

DINING AND ITS AMENITIES By a Lover of Good Cheer Demy 8vo Cloth Pp 478 Price, $2 50 New York Rebman Co, 1907

PUBLICATIONS FROM THE LABORATORIES OF THE JEFFERSON MEDICAL COLLEGE HOSPITAL. Vol 8 Paper Philadelphia 1906

NEW PATENTS

Patents recently granted of interest to physicians

841701 Hypodermic syringe Justin De Lisle New York.
842140 Organic iodin preparation Emil Fischer Berlin Germany
842007 Atomizer or pump sprayer Ernest A. Jahn, London Eng
841782 Apparatus for the treatment of lung and throat diseases Charles S James Los Angeles.
841988 Artificial ear-drum Abraham Leers Atlanta Ga.
841702 Device for handling lifting or supporting invalids Thomas A Martin, Covington Ky
841714 Head truss Walter D Peters Minneapolis.
842008 Artificial leg John T Apgar New York
842009 Artificial leg John T Apgar New York.
842612 Obtaining solutions of bacterial poisons Peter Bergell and F Meyer Berlin Germany
842390 Spray producing point for atomizers A De Vilbiss Toledo Ohio
842631 Apparatus for injecting solid vaccine matter Hippolyte Deperdussin Paris, France
842069 Physicians cabinet Henry A Hughes St. Louis
842800 Portable sick room tent. J C and A. E. Moore Philadelphia.
842252 Truss John Sault Queensbury N Y
842503 Massage apparatus George F Trotter and A Bebout, St. Louis
843319 Stethoscope. Peter A Aarness Minneapolis
842875 X ray tube Mylius Ehrhardt Berlin, Germany
843354 Electrode for therapeutic use etc. Everett T Nealey Bangor Maine
843168 Truss Franklin A. Nims Greeley, Colo
842973 Spring and mattress for invalid beds Edith B Preston Mexico Mo
843404 Container for surgical ligatures H Rosenberg Berlin Germany
843663 Eye-exerciser George Bullock, Poplar Bluff, Mo.
844097 Inhaler Yancey O Caldwell Paris Tenn
843587 Surgical instrument. Henry H De Pew Chicago
842674 Massaging apparatus E M Funk Wytheville, Va
844137 Truss. Peter Kaseler Brooklyn
844054 Indicator for medicine bottles. A. R. Swope Philadelphia
[illegible] J B. Wantz Chicago